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Technical Report EL-93-9
June 1993

Environmental Characterization for Target Acquisition

Report 1
Site Descriptions and Measurements

by Tommy Berry, Salvador Rivera, Jr., Bruce Sabol
Environmental Laboratory

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Prepared for U.S. Army Aviation Applied Technology Directorate
and Headquarters, U.S. Army Corps of Engineers

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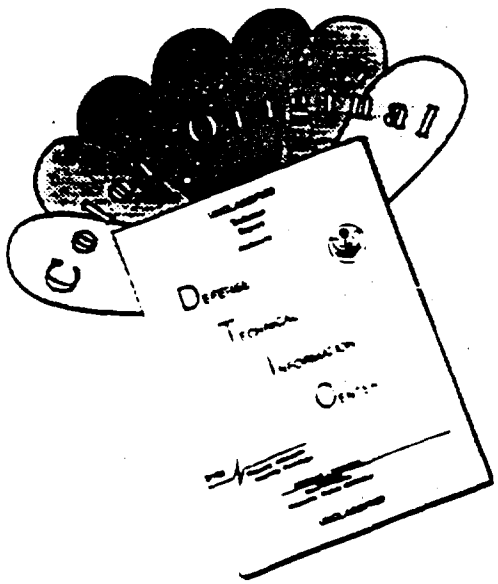

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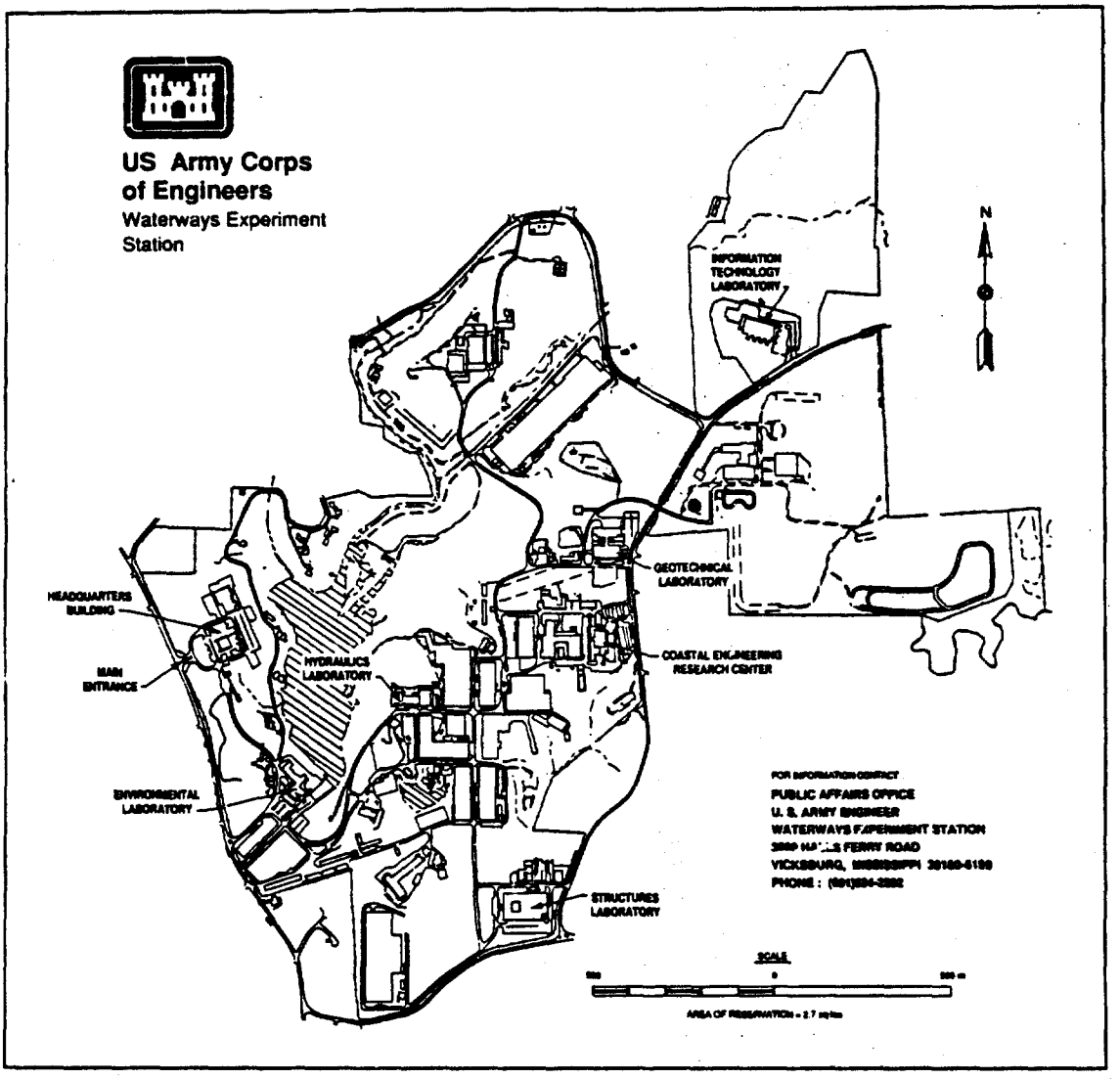

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Preface

The study reported herein was conducted by the U.S. Army Engineer Waterways Experiment Station (WES) during fiscal years 1990-1992 as part of the Environmental Characterization for Target Acquisition (ECTA) Program. This program was jointly funded by the U.S. Army Aviation Applied Technology Directorate (AATD), Fort Eustis, VA, and by the Headquarters. U.S. Army Corps of Engineers (HQUSACE) under Project AT40, Scene Dynamics. Mr. Nyle Wilcocks was the AATD Technical Monitor. Mr. Jerry Lundien was the HQUSACE Technical Monitor.

The study was conducted under the general supervision of Dr. John Harrison, Director of the Environmental Laboratory (EL), WES, Dr. Victor Barber, Acting Chief of the Environmental Systems Division (ESD), EL, and Mr. H. Wade West, Chief of the Environmental Analysis Group (EAG), ESD. Mr. Bruce Sabol, EAG, was Principal Investigator responsible for the ECTA Program. Coordination and direct field supervision was provided by Mr. Ken Hall, EAG. Field support was provided by Messrs. Tommy Berry, Sean Brewer, Charles Hahn, Ken Hall, Terry Justice, Salvador Rivera, Jr., and Joseph Wooley, EAG, and Humphrey Barlow and David Leese, Instrumentation Services Division, WES. Computer support was provided by Margaret Sabol and Eddie Melton, ARC Professional Services. Messrs. Berry, Rivera, and Sabol prepared this report.

At the time of publication of this report, Director of WES was Dr. Robert W. Whalin. Commander was COL Leonard G. Hassell, EN.

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Conversion Factors, Non-SI to SI Units of Measurement

Non-SI units of measurement used in this report can be converted to SI units as follows:

Multiply	By	To Obtain
degrees (angle)	0.01745329	radians
feet	0.3048	meters
inches	2.54	centimeters
miles (statute)	1.609347	kilometers
pounds (mass)	0.4535924	kilograms

1 Introduction

Background

Automatic/Aided Target Recognition (ATR) systems are a developing class of machine vision devices that scan a field of regard (FOR), process that information, then report potential objects of interest (targets) to a human operator or to another automatic device. It is the intent of the U.S. Army to develop ATR systems for existing and next-generation attack and reconnaissance helicopters. Performance goals for ATR systems are that they have very high probability of reporting valid targets and very low probability of reporting invalid or false targets for all conditions under which they will operate. Developing ATR systems use sensor information obtained from passive visible and thermal infrared imagers, millimeter wave (MMW) radar, and laser range finders, and nonsensor information such as digital terrain data and location information from global positioning systems (GPS).

Early testing of developing ATR systems has identified problems in achieving required performance goals. Systems have exhibited inconsistent performance over their intended operational environment, low probability of detection, and high false alarm rates. Further, detection probability and false alarm rates have demonstrated a high degree of sensitivity to terrain and environmental conditions, particularly for the passive sensors. This has made it clear that it is imperative to test under a broad range of terrain and environmental conditions during the development cycle. Testers and evaluators in the ATR development community are now burdened with determining the following:

a. Which continental United States (CONUS) test sites should be used for testing and when they should be used.

b. How to compare ATR performance results from different CONUS test sites--which sites represent more difficult conditions.

c. Which available CONUS test sites are most analogous to potential theater of operation sites.

d. How to specify terrain and environmental conditions in an ATR system performance test.

The Environmental Characterization for Target Acquisition (ECTA) program was initiated in an attempt to address these types of concerns. The primary goals of the ECTA program are to develop and apply a methodology to quantify scene complexity of available candidate ATR testing and training sites and to establish methods for specifying terrain and environmental conditions in ATR system

performance tests for thermal and visible electro-optical (EO) imager systems and 35-GHz radar sensor systems.

Approach

Almost all ATR systems use statistical pattern recognition techniques to detect targets within a designated background scene. This is true whether the system uses a passive EO imager or an active radar sensor. The ATR logic filters the entire signal for targetlike regions that it examines in greater detail to make first-level (detection) target acquisitions decisions. Detection is the only stage that examines the entire signal; all subsequent stages use only the portion of the signal containing the regions of interest. Therefore, background only affects the detection stage in this hierarchy. The final success of target acquisition (i.e., classification, recognition, and identification) therefore depends on the system's ability to separate targets from background features.

Based on these considerations, an approach was formulated that entailed processing imagery and signals to measure the distribution of targetlike features within the background scene that could result in poor ATR performance (missed detections and false targets). Scenes having a high density of targetlike features are characterized as being complex, and those with few such features are deemed simple. These scene characterization measurements, or metrics, would be determined using thermal and visible image data, and 35-GHz radar data representing a systematic sampling of commonly used CONUS test sites at different times of the day and of the year. These sites would be subject to intensive ground truth data collection of key terrain and meteorological attributes during imaging periods. An analysis would be conducted to relate ground truth conditions to scene complexity levels for each sensor type and to devise a means of categorizing scene complexity for these sites.

Scope and Structure

Several constraints were placed on the conduct of the program as follows:

a. Field measurements would be conducted only at five sites commonly used for testing of Army aviation ATR systems.

b. Each site would be visited at least twice--once during leaf-on conditions and once during leaf-off conditions (for deciduous vegetated sites).

c. Data collected at each site would be limited to a 3-day period and would include a 24-hr imaging period.

d. Existing U.S. Army Engineer Waterways Experiment Station (WES) instrumentation and imaging assets would be used (includes only visible and thermal imagers; no radar sensor was available).

e. Imagery (35-GHz radar) collected by the Martin Marietta Corporation's 68D radar system during the Multi-Sensor Fusion Demonstration (Hahn, Hall, and Sabol, In Preparation) at Fort Hunter Liggett, CA, would be used, and radar analysis would be conducted as a stand-alone task unrelated to the visible and thermal imaging tasks listed in items *a* and *b* above.

The ECTA program is documented in three separate reports. This report describes ground truth measurements made at each of the selected sites. The procedures used for collection of terrain, meteorological, and radiometric data are described in the main body of this report; a data summary for each individual site is contained in separate appendices. The second report (Sabol and Rivera, In Preparation) describes analysis of thermal and visible scenes and their relationships to the site's ground truth measurements. The third report (Curtis and Sabol, In Preparation) describes the radar scene complexity analysis conducted using the Martin Marietta radar data collected at Fort Hunter Liggett, CA.

2 Site Locations and Descriptions

Sites and Locations Examined

Data collections were conducted at five CONUS test sites commonly used by Army aviation systems testing and evaluation. The areas were selected to allow data to be collected as an analog of temperate, coastal plains, and semiarid environmental conditions as follows.

Terrain Type	Data Collection Site(s)
Temperate	Aberdeen Proving Ground, MD Fort Drum Military Reservation, NY Fort A. P. Hill, VA
Coastal plain	Eglin Air Force Base, FL
Semiarid	Yuma Proving Ground, AZ

Site Descriptions

A brief description of each site is contained in the following paragraphs. Additional site information and more detailed site maps are included in the respective appendices for each site (Appendices A-E).

Aberdeen Proving Ground, MD (APG)

APG is located at latitude 39°25'00" N, longitude 76°30'00" W, in the eastern United States, approximately 40 miles[1] north of Baltimore, MD, on the western side of Chesapeake Bay. Data were collected from the "H" Field area of the Edgewood Arsenal section of APG (Figure 1). The field was under control of the U.S. Army Test and Evaluation Command (TECOM). The "H" Field complex at Edgewood is midway down Rickett's Point Road on a peninsula protruding toward Chesapeake Bay. The site consisted of grasslands, standing water, trees, and man-made objects. The ground surface is saturated (water table near surface) in areas near Lego and Sandy Points on the Bush River. Grassy conditions varied from the well-maintained pasture to natural swamp-type reeds.

[1] A table of factors for converting non-SI units of measurement to SI (metric) units is presented on page vii.

Figure 1. Map of ECTA site at Aberdeen Proving Ground

The topography of the area was generally flat (< 5 percent) with some slopes (< 15 percent) in the view on the north edge of the range. Deciduous forests bordered the range on the north and south sides, and scattered groups of deciduous trees were along the shoreline (a more detailed site map may be found in Appendix A).

Fort Drum Military Reservation, NY (FDMR)

FDMR is located at latitude 44°10'00" N, longitude 75°40'00" W in the northern United States, approximately 65 miles north of Syracuse, NY, between Lake Ontario and the Adirondack Mountains. Data were collected in sections of Area 12 and 13 (Figure 2). These areas were under control of Directorate of Plans, Training, Mobilization, and Security, Range Division.

Areas 12 and 13 are located in the northeastern quadrant of the training area. Sections of these areas are on both sides of Antwerp Road north of the intersection with Gray Road. Terrain conditions consisted of grasslands with scattered shrub trees and a forested background. The grasses tended to remain short throughout the growing season. Trees were deciduous, and the forests were natural, not managed or tree farmed. Trees were located on higher ground with slopes of

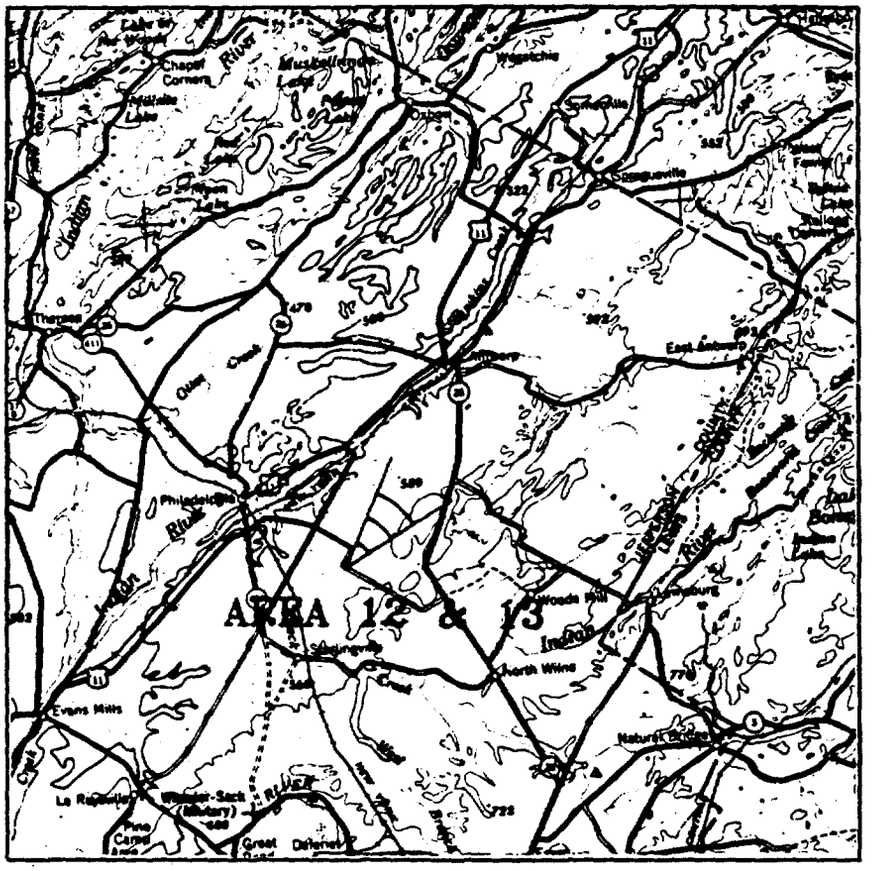


Figure 2. Map of ECTA site at Fort Drum Military Reservation

< 15 percent. The flat areas were poorly drained, dissected with small, seasonal streams, and had slopes of less than 5 percent.

Fort A. P. Hill, VA (FAPH)

FAPH is located at longitude 38°10'00" N, longitude 77°05'00" W in the eastern United States, approximately 40 miles north of Richmond. Data were collected at the U.S. Army Night Vision and Electro-Optics Directorate (NVEO) site located in the Drop Zone area of FAPH (Figure 3). The terrain conditions consisted of a large area of mowed grasslands surrounded by managed forests consisting of both conifer and deciduous trees. The terrain was gently rolling with slopes less than 10 percent and was well drained to low areas or marshes. No standing water was visible from the sensor location.

Figure 3. Map of ECTA site at Fort A. P. Hill, VA

Eglin Air Force Base (AFB), FL

Eglin AFB is located at latitude 30°45'00" N, longitude 86°15'00" W, approximately 10 miles northwest of Fort Walton in the panhandle region of Florida. Data were collected at range C-72 located east of Florida state Highway 285 and south of Highway 280 (Figure 4). The terrain consisted of grasslands with many small shrub oak trees. The topography was smooth and rolling with slopes < 15 percent. One major depression, Rocky Creek, traversed the midrange of the area. Managed conifer forests bordered the range on the northeastern and southwestern sides. Some deciduous trees were mixed with the conifers in the moist stream bottomland. Soils were sandy and well drained. The height of range vegetation was limited by biannual disking or chopping. The 3246 Test Wing Special Activities Office has control of the C-72 range.

Yuma Proving Ground, AZ (YPG)

YPG is located at latitude 33°00'00" N, longitude 114°30'00" W in the southwestern United States, approximately 20 miles north of Yuma, in the extreme southwest corner of Arizona. Data were collected at site 9 on the Cibola Test Range (Figure 5). This site is located north of the main

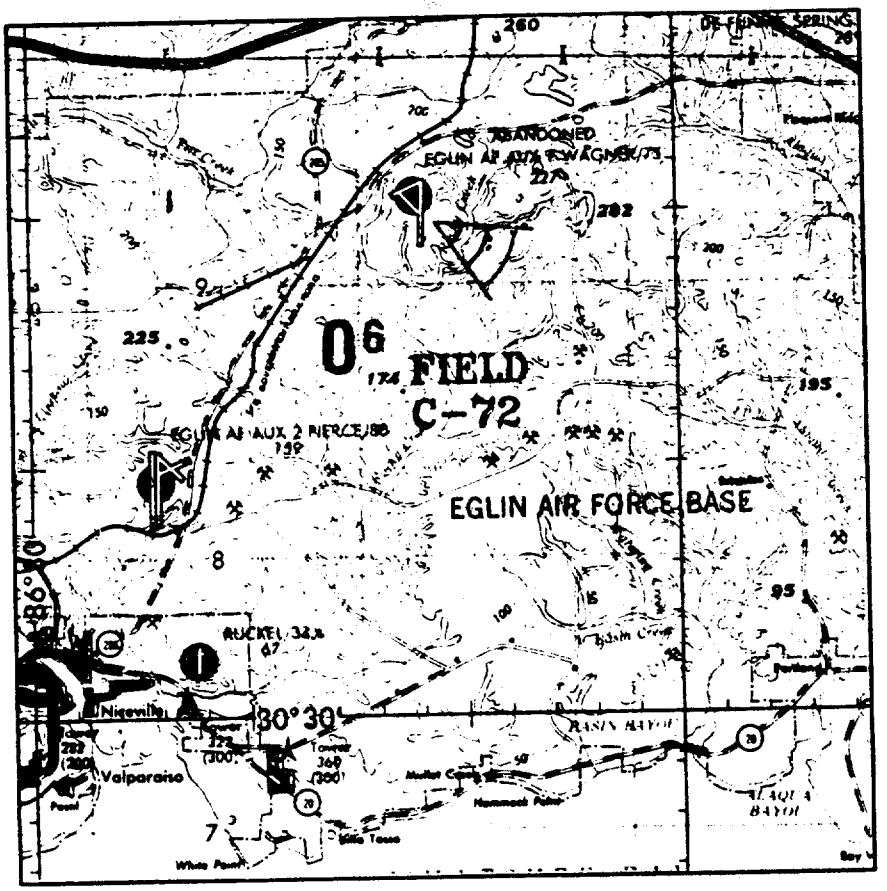


Figure 4. Map of ECTA site at Eglin AFB, FL

post and east of Highway 98, and overlooks the McAllister and Indian Wash areas, which drain southwest to the Colorado River. The area is bounded on the west and northwest by the Chocolate Mountains and to the east and southeast by the Middle Mountains. Viewed from the sensor location, the terrain consisted of barren, exposed terrain with sparsely vegetated areas predominately located along ephemeral streams (washes). The vegetation consisted of cacti, desert bushes and shrubs, and an occasional hardy tree. There was no water visible, nor were any large buildings present in the scene evaluation. Site 9 area is under the control of TECOM at YPG.

Data Collection Periods

The data collection periods were set to sample deciduous sites (APG, FDMR, and FAPH) during leaf-on (summer) conditions and leaf-off (winter) conditions. YPG and Eglin AFB were only sampled once because there is little seasonal variation in vegetation conditions. Each data collection exercise encompassed a 3- to 4-day period.

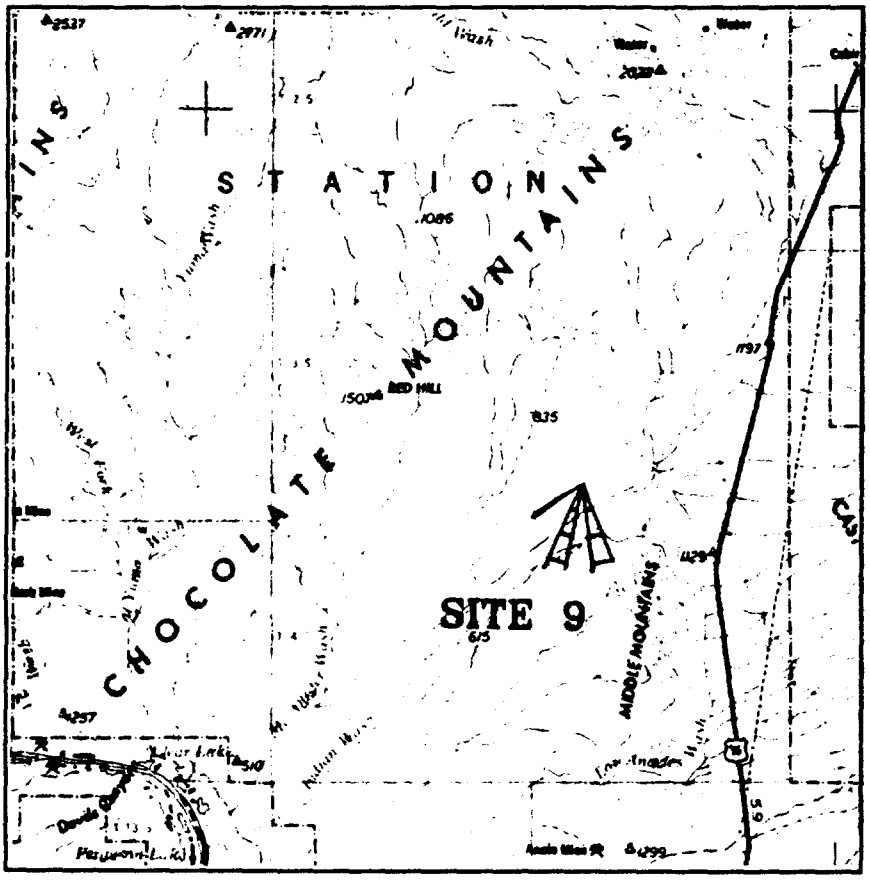


Figure 5. Map of ECTA site at Yuma Proving Ground, AZ

The data collection schedule is specified below:

Site	Data Collection Date(s)
YPG, AZ	10-15 September 90
FAPH, VA	13-15 March 91, 19-21 July 91
APG, MD	18-21 March 91, 15-18 July 91
FDMR, NY	24-27 March 91, 10-13 July 91
Eglin AFB, FL	9-13 August 91

3 Terrain Characterization Procedure

A set of standard site characterization procedures was used to provide quantitative site descriptions. Topography, dominant soil features, and vegetation are considered key descriptors of terrain conditions. Measurement of these factors facilitates direct comparisons between the respective test sites. These procedures are discussed in the following paragraphs. Data resulting from the application of these techniques are contained in the respective appendices for each site (Appendices A-E).

Topographic Data and Applications

Topographic measurements were taken at each test site. The procedure included measuring a minimum of 20 elevation points within the FOR with a Wild T-1000 theodolite coupled with a Wild DI-3000 laser range finder and a GRE4 electronic field book. The data were downloaded using a Wild GIF2 interface to a portable laptop computer for field processing. The instrument location during these measurements was the designated sensor location used for imaging. Data points were selected to document prominent local terrain features and man-made objects and to enable registration of the sensor position in the existing digital elevation database for each site.

A portable scaffolding tower, or existing permanent tower if available, was used as the sensor location and the instrument location for survey measurements. A field technician carrying a reflector prism would traverse the FOR, stopping and identifying key terrain features. The location of these features was recorded by the technician at the theodolite position. The technicians also located two control positions within the FOR that were used to determine the sensor location.

The sensor position and orientation were determined using these two control points. Requirements for these points were that they must be in clear line of sight (LOS) to the sensor location and must have known latitude, longitude, and elevation coordinates. If existing benchmark points were within the FOR and could be located, they were used; if not, they were established by WES using a static GPS method described below.

The static GPS technique (U.S. Army Corps of Engineers 1991) used three receivers to establish temporary control points within the FOR based on the use of nearby National Geodetic Survey (NGS) points. The GPS data were collected using the Trimble 4000-SST Geodesist II P dual frequency receivers. The L1-L2 GPS data were downloaded to a portable laptop computer at the field site. The computer contained an NGS database of control points at the site, as well as the postprocessing

software to compute universal transverse mercator (UTM) or latitude-longitude coordinates for the reference control points. The GPS equipment enabled establishment of control points needed to determine the sensor site location and to orient the sensor system to true north.

Digital elevation data (DED) were obtained or developed for each site. The DED is an array of digital elevations defined by m rows and n columns in which every combination of row and column represents a terrain elevation data point. To obtain DED for each site, the following steps were taken:

a. Obtain a 1:50,000-scale, hard copy map of the site of interest from the Defense Map Agency Topographic Center.

b. Locate the area of interest.

c. Determine the upper-left (X_1,Y_1) and lower-right (X_n,Y_n) UTM coordinates of the area of interest and determine the map zone.

d. Select the grid size to be used. The grid size is the spatial distance (meters) used for data gridding. A 10-m grid size was used for all ECTA sites.

e. Digitize the map contour lines within the area of interest.

f. Use ARC/INFO software to perform gridding and produce a final computer file.

Information for all DED are summarized in Table 1.

Table 1
Summary of Digital Elevation Data for ECTA Sites

Site	Map Information (Name, Edition, Series, Sheet)	UTM Upper-Left Coordinate (X_1,Y_1), km	UTM Lower-Right Coordinate (X_n,Y_n), km	Grid Size m
Fort Drum	Antwerp, 3-DMATC, V721, 5872II	447,4891	451,4886	10
Eglin AFB	Niceville, 5-DMATC, V747, 3745III	562,3393	568,3389	10
APG	MPBIM,[1] November 1970, Greenhorne and O'Mara maps	388,4356	392,4352	10
A. P. Hill	Bowling Green, 2-DMA, V734, 5560III	290,4228	294,4224	10
YPG	Red Hill, 3-AMS, V798 3150III	735,3669	750,3660	100

[1] MPBIM = master plan basic information maps.

In this study, DEDs are primarily used to estimate the range between the sensor location and the terrain surface along a given LOS. This passive ranging technique employs a standard ray-tracing algorithm to compute the distance between the camera position and terrain intersection based on a flat facet terrain model of the DED. This technique was used iteratively to generate range images that were required for the image analysis described in Report 2 (Sabol and Rivera, In Preparation). The algorithm requires the x,y,z camera position (UTM coordinates and elevation above sea level), the azimuth and elevation angles to which the camera was aimed, and the site DED.

Prior to computation of range image, steps were performed to ensure that the camera position and orientation were correctly registered within the DED. These steps consisted of the following: (a) an affine transform to correct any horizontal location or orientation misregistration between the camera position and the DED and (b) an elevation correction to account for any vertical error between surveyed elevations and corresponding points in the DED. Following this correction, passive ranges were computed to all surveyed points and an error analysis was performed by comparing the absolute differences between the actual surveyed ranges with the passive range estimates. Among all sites, the mean absolute percent error was 11.30 percent; 39 percent of the points had an absolute error <5 percent; 60 percent of the points had an absolute error of less than 10 percent.

Soils

A systematic set of soil characteristic data was collected at each site. These data included the following: soil classification (type), Atterberg limits, grain-size analysis, and moisture content at the time of data collection.

Bulk samples were collected from each of three separate 1-m^2 areas within the FOR at each site. These samples were collected from the upper surface strata (top 2 to 3 in.) without including vegetative material. Sufficient sample volume (5 to 10 lb per sample) was collected to allow for all laboratory analysis.

Soil samples from each site were assigned a number for identification purposes. Laboratory tests consisting of soil classification, Atterberg limits, mechanical sieve analyses, and hydrometer analyses were performed on each sample. These laboratory tests were conducted in accordance with standard procedures (U.S. Army Corps of Engineers 1980). Complete results of soils analysis are contained in the respective site appendices (A-E); an example of a laboratory sample report is contained in Figure 6.

Soil classification

The Unified Soil Classification System (WES 1960) guidelines were used to identify the soils as to the texture and plasticity and to classify grouping with respect to behavior.

Atterberg limits

These measurements consist of three plasticity stages that are a function of moisture ranges. Data on Atterburg limits are included on the bottom of the soil gradation sheets (Figure 6). Atterberg limits are defined below:

a. Liquid limit (LL). Defines the upper plastic range of the soil.

b. Plastic limit (PL). Defines the lower limit of the plastic range of the soil.

c. Plasticity index (PI). The difference between the liquid limit and the plastic limit.

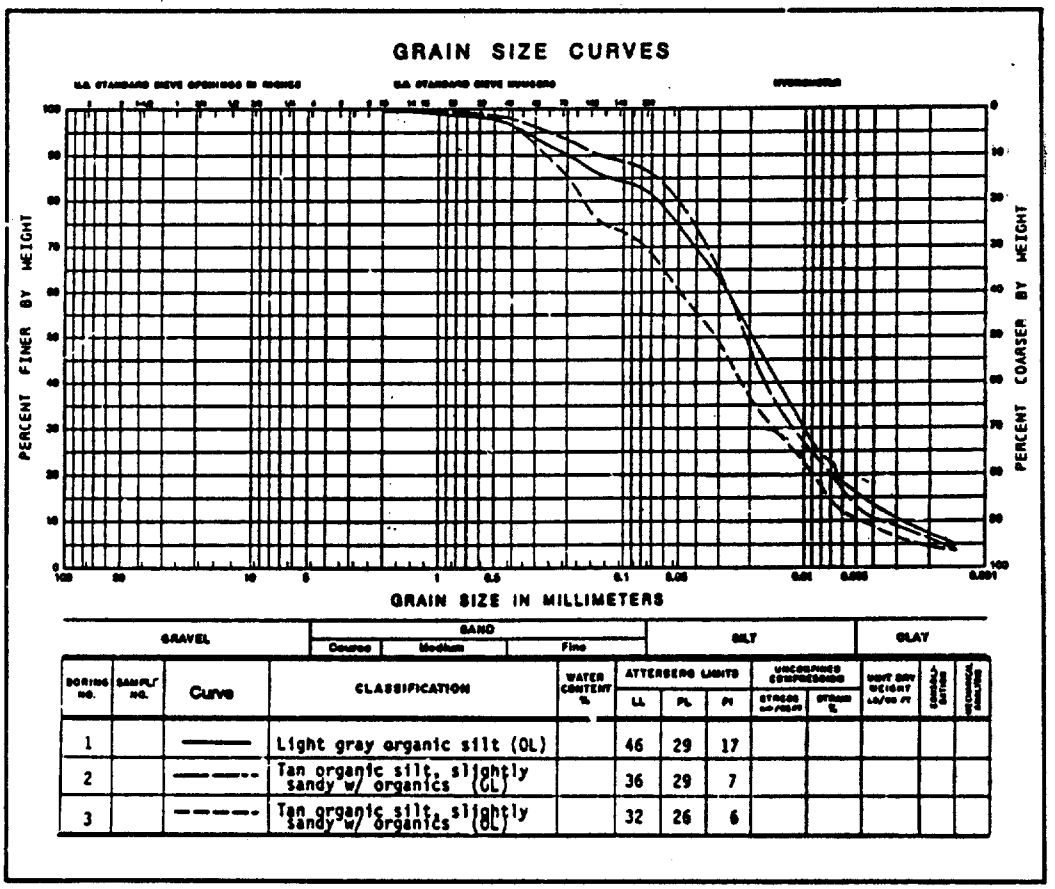


Figure 6. Example of sample report from a soils laboratory

Mechanical sieve and hydrometer analysis

These two tests show the distribution of particle sizes within the soil. Results are graphically depicted on a soils laboratory reporting sheet (Figure 6).

Mechanical sieve analysis is first conducted on the sample using a standard nest or stack of sieves organized by the openings in the screen from the largest (#10, 2.0 mm) on top to the smallest (#200, 0.075 mm) on the bottom. The larger particles are retained on sieves before the #200 and weighed at each respective sieve.

Hydrometer analysis is conducted on the remaining portion of the sample—the fines that passed the #200 sieve. The hydrometer analysis involves mixing the soil into a solution and measuring the amount of settling at specified time intervals. The results of these analyses are presented in the form of grain-size curves (Figure 6).

Soil moisture

The Speedy Soil Moisture Meter was used to measure field soil moisture the day of data collection. The soil moisture is related to soil type and was collected at each bulk soil sample area. A moisture sample was collected from the soil in the bulk sample as well as a moisture sample collected from a representative spot within the bulk sample area. These numbers, represented by a percent moisture by weight, were averaged and recorded by the field personnel. If the second reading was in error by ± 10.0 percent, a third reading was taken as a check.

Vegetation

Vegetation characterization was limited to assigning descriptive classification to vegetated areas such as grassland, scrub brush, or forest. In grassland, vegetation height was measured, and its growth status (active or dormant) was recorded. The scrub/brush category was used to record short, woody vegetation. The forest was recorded as coniferous or deciduous, and the estimated tree height along the forested edge was recorded. Photographs were taken of representative vegetation types.

Hydrography and Other Terrain Features

The presence of standing water was considered important, and any areas of standing or ponded water in LOS of the sensor position were recorded. Other natural or man-made terrain features of a semipermanent nature (hills, gullies, man-made objects) were recorded as to position and range from the sensor location during the data collection effort.

Photography

Complete color photographic coverage of the FOR was taken during a well-illuminated time at each site. Photographs were used to measure scene contents (described in Chapter 5). A mosaic of the individual scenes created a panoramic view of the FOR. These field of view (FOV) mosaics, with azimuth and elevation angle notations, are contained in the respective site appendices. Other photos document placement of sensors, vegetation characteristics, soil, grass, scrub brush, and trees.

4 Dynamic Measurements

Dynamic variables here are considered to be those variables that change appreciably over the course of a day. These include meteorological conditions and radiometric measurements of terrain features. Each type of measurement is described below; tabular and graphic data summaries are contained in Appendices A-E.

Meteorological Measurements

Meteorological data were collected by an automatic portable weather station (Figure 7) placed near the sensor location. Parameters measured included air temperature, solar radiation, relative humidity, barometric pressure, precipitation, and wind speed and direction. The units associated with these parameters, the sensors used to measure them, and the accuracy of these sensors are shown in

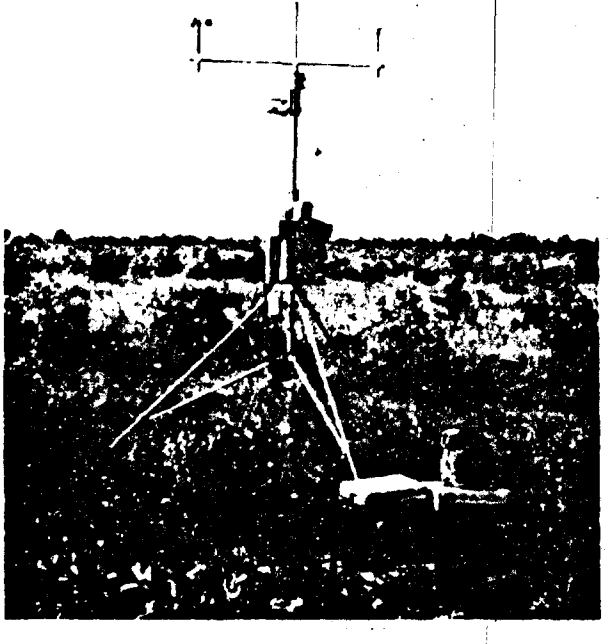


Figure 7. Portable weather recording station

Table 2. A Campbell Scientific Inc. model CR21XL micrologger was used for data collection and storage. The data were digitally stored on a Campbell Scientific Inc. model SM192 storage module and transmitted from the micrologger to an additional storage/display unit at the instrument truck location via a radiotelemetry network. Measurements were made once a minute and were output and transmitted as 15-min averages. Wind speed and direction measurements were taken from a height of 6.5 ft above ground level.

Table 2
Meteorological Data Collected

Variable	Instrument	Accuracy	Units
Air temperature	Fenwal electronic UUT51J1 thermistor	±0.4	Degrees Celsius
Relative humidity	Phys-Chem. research PCRC-11	(25-94) < 1 (12-25) or (94-100) < 3	Percent
Solar radiation (0.5 to 1 μm)	Li-Cor LI200S pyranometer	±5%	Watts/square meter
Barometric pressure	Kavlico Inc. P550-15AA2A barometer	±0.3 mb	Millibar
Mean wind speed	Met One, Inc. model 014a contact anemometer	±1.5%	Meters/second
Mean wind direction	Met One, Inc. model 024a pontentiometer windvane	±5 deg	Degrees clockwise from north
Precipitation	Texas Electronics, model TE525 tipping bucket rain gage	1% at 2 in. per hour or less	Inches

Thermal Infrared Measurements

Radiometric temperature data of background terrain features were collected using a set of infrared staring radiometers that measure apparent temperature. Everest Interscience Inc. model 4000a infrared temperature transducers were used; these have the following characteristics: FOV of 2 or 4 deg, bandpass of 8 to 12 μm, resolution of 0.1 °C, and accuracy of ±0.5 °C. Each measurement recorded is the average of three instantaneous measurements taken over a 15-min period. An emissivity of 0.99 was assumed for temperature estimation.

Radiometers were distributed to provide a representative sampling of different terrain types within the site. Sensors were mounted on a tripod and positioned 2 to 6 ft away from the surface to be measured (Figure 8). The surfaces measured were viewed from the same orientation as the camera sensors (discussed in Chapter 5); care was taken to ensure that the sensor never produced a shadow on the surface being measured.

These data provide radiometric temperature data for individual feature types and a means of estimating thermal contrast of background materials. Five classes of feature types were measured including grass, tree, bush, soil, and road. Not all five surface types were present at each site.

Figure 8. Radiometric temperature measurement sensor

Appendices A-E contain both plots of average diurnal radiometric temperatures by feature types and listings of the radiometric data.

5 Scene Measurements

Imaging Equipment Specifications

The imaging equipment consisted of a far-infrared (IR) to (8 to 12 μm) thermal imager, a mid-IR (2 to 5.6 μm) thermal imager, and a low-light camera (0.4 to 0.8 μm). A filter (passing wavelengths >3.5 μm) was attached to the mid-IR thermal imager to reduce solar reflections. The specifications for these cameras are shown in Table 3. These cameras were mounted on a Wild T-1000 theodolite and boresighted using Wild adjustable pincher mounts (Figure 9).

Table 3
Imaging Equipment Specifications

Specification	Wave Band		
	Mid-IR	Far-IR	Visible
Model	Thermovision 870 system, infrared camera	Thermovision 782 system, infrared camera	Photometrics 200 camera, with Thomson CCD detector
Wavelength band	2 to 5.6 μm (without filter) 3.5 to 5.6 μm (with SRX filter)	8 to 12 μm	0.4 to 0.8 μm
FOV lens	2.48 square deg	3.63 square deg	3.9 deg horizontal 2.6 deg vertical
Screen resolution	140 by 140 square pixels	140 by 140 square pixels	384(h) by 576(v) pixels
Image resolution	8-bit resolution	8-bit resolution	14-bit resolution
Radiometric sensitivity	0.1 °C at 30 °C object temperature	0.1 °C at 30 °C object temperature	Not calibrated
Radiometric accuracy	± 2% or ± 2 °C	± 2% or ± 2 °C	Not calibrated

The visible camera was not radiometrically calibrated; however, all exposure and filter settings were held constant for all imagery. The system had no automatic gain control; therefore, it was possible to make relative comparisons of brightness values between images.

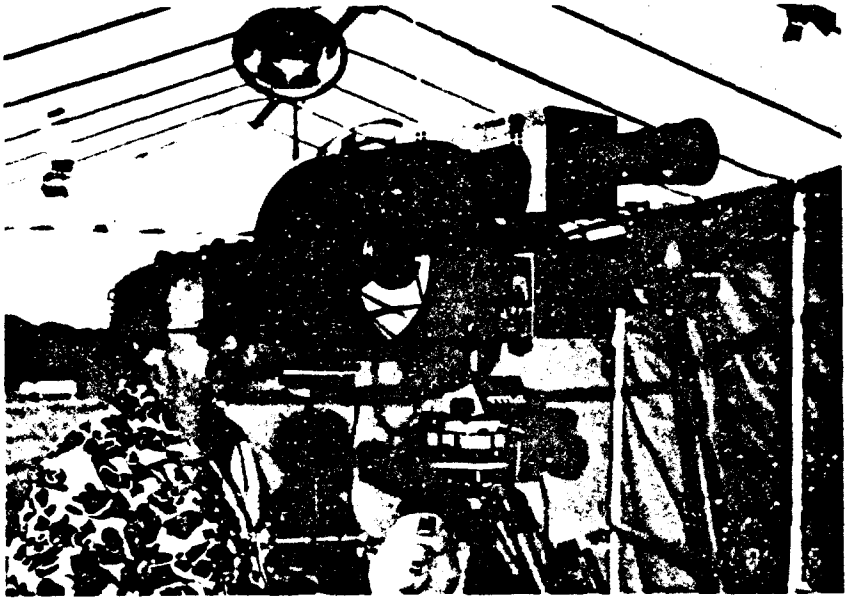


Figure 9. Camera systems mounted on theodolite

The IR cameras contain no built-in blackbodies; however, each was recently calibrated at the manufacturer's facility. Further, these DC-restored scanning radiometer cameras require manual setting of the levels and ranges. Consequently, a procedure was employed to verify the accuracy of the radiometric temperature estimates and to ensure that the manually set thresholds of all images were within dynamic range. The field portion of this procedure consisted of the following steps:

a. Two passive blackbodies (Figure 10), 18- by 18- by 0.5-in. steel plates, painted with flat black enamel, were set such that both could be directly viewed by the sensors within a single FOV. One blackbody was shaded from direct sunlight and sky exposure, resulting in a measurable temperature difference between the two blackbodies under most conditions. Thermistors, embedded in the front and back of each blackbody, recorded physical temperature, which was stored on a micrologger and digitally displayed in the instrumentation truck.

b. Before and after each imagery data collection period (every other hour), the two passive blackbodies were imaged by the thermal cameras. Three IR images were taken: far-IR, mid-IR, and mid-IR with sun filter. Simultaneously, the thermistor temperature of each blackbody (averaged temperature = (front + rear)/2) was recorded.

For quality assurance purposes, all images were automatically checked upon completion of each imaging period to identify images out of dynamic range. Images with greater than 2 percent of the brightness values less than 2 or greater than 253 digital brightness units were rejected.

The accuracy of the factory calibrations was examined by data set for each camera and excursion by comparing the camera's radiometric temperature estimates of the blackbodies with the physical temperatures measured from the blackbodies. When the calibration resulted in 90 percent of the values of absolute errors being under 2 °C with no errors greater than 3 °C, the data set was

Figure 10. Blackbodies used for calibration

accepted. When errors exceeded these bounds, several sequential corrective procedures were employed. The first consisted of a linear adjustment to fit the camera's radiometric temperature estimate to the physical temperature of the blackbodies. The form of this correction is:

$$T_{BB} = (a \cdot T_c) + b$$

where

T_{BB} = physical temperature of blackbody, °C

T_C = camera's radiometric estimate of blackbody temperature, °C

a = slope estimated by least squares regression

b = intercept estimated by least squares regression

When the blackbody temperature estimates could be corrected to meet the accuracy criteria, the corresponding scene images were used with this correction. For data sets that still did not meet the criteria, additional lower level corrections were attempted. These included linear corrections on individual hourly images as a group and, in a few cases, low level linear calibration of individual scene imagery using radiometer estimates of scene element temperature and slope estimates determined from the range setting used for the particular image. In the end, only images meeting the accuracy criteria were used.

Data Collection Procedures

The following paragraphs explain the general procedure followed in the field to collect meteorological, radiometer, and IR and visible imagery data.

Upon arriving at a site, automatic recording instruments were set up. Meteorological and radiometric measurement stations were set up to collect at least 12 hr of data before the beginning of diurnal imaging. A single weather station positioned near the sensor position recorded meteorological variables described in Chapter 4. Several radiometer stations were set up to measure and record radiometric temperatures of predominant terrain features found within the FOR. Two passive blackbodies were located such that they were in the LOS of the sensors and in a single FOV for both thermal cameras. An opaque material was placed over one of the blackbodies to shade it from direct sunlight and sky exposure, creating a temperature difference between the two blackbodies.

The camera position was picked to simulate a helicopter search scenario. The desired viewing geometry was to achieve a clear LOS of 1 to 3 km and to minimize viewing of terrain at shorter ranges. This viewing geometry was fully achieved at some sites (FAPH, YPG, and Eglin AFB), but only partially achieved at the other sites. Camera position was surveyed to measure horizontal position in UTM coordinates and vertical coordinates in meters above mean sea level. Once the sensor location was selected, 10 to 20 contiguous FOVs in 2.5-deg horizontal increments were selected. With a few exceptions, all scenes contained no vehicular targets. The exceptions consisted of four scenes at YPG that contained tank and truck hulks, six scenes at FAPH that contained transient targets during one imaging period, and one scene at APG that contained two tank hulks.

In preparation for imaging, cameras were mounted on the theodolite and powered up. Every time the cameras were mounted or mechanically adjusted on the theodolite, it was necessary to perform a boresight adjustment procedure that consisted of the following:

a. A boresight flare position was selected. This position was 200 to 300 m from the sensors. The exact range was measured and entered into the customized software program BORESITE.

b. A highway flare was lit at the selected position, and the theodolite was aimed at the flare.

c. Each individual camera was mechanically aligned until the flare was within 2 to 3 pixels of image center.

d. An image from each camera was captured using the BORESITE program. The user specified the flare position with the cursor, and the program determined the image pixel location corresponding to the true theodolite LOS corrected for parallax.

Imaging was conducted from before sunrise on the second day of a field exercise until sunrise on the third day. The imaging interval was set at every other hour. Each imaging cycle began with the farthest left scene and proceeded clockwise to the farthest right scene. A standard file name convention was used that specified site, scene number, camera/filter combination, date, and time. Digital images were captured by averaging 10 sequential frames; this served as an image noise reduction technique. For each single scene, the mid-IR camera captured an image with and without the solar reflection bandpass filter. Daylight images with visible camera were obtained with an exposure time of 0.1 sec with combined 2x and 4x neutral density filters in place. Thermal images of the

blackbodies were captured immediately before and after each bihourly FOR imaging. Color photographs were taken during daylight imaging of each scene with a 35mm camera equipped with a zoom lens and mounted on the theodolite.

Photointerpretation of Scene Content

Major terrain features visible within each individual scene were recorded by photointerpreting the color photography taken at each site. Steps involved in this process were:

a. Delineating the perimeter of a common FOV for each scene.

b. Delineating the boundaries of each terrain feature within each FOV.

c. Digitizing the boundaries into ARC-INFO data files.

d. Extracting terrain cover and boundary information from the ARC-INFO file with a custom-written C program.

e. Storing this information in a database for later use.

Each of these steps is briefly described below.

A single 8- by 12-in. print enlargement was made from the 35mm color photography taken of each individual scene. A mylar sheet was overlaid on each print. A bounding rectangle was drawn on the mylar which corresponded to a FOV of 2.5 deg (horizontal) by 2.7 deg (vertical); position of the rectangle was guided by use of the corresponding visible image obtained with the CCD camera.

Terrain types discernable within each photo were drawn on the mylar by an interpreter familiar with the site. The mapping categories used are shown in Table 4. Each terrain type polygon was labeled with a three-character code. The first character denotes the general terrain type, which was divided into eight categories: mountains, roads, trees, bare ground, man-made structures, water, short vegetation, and sky. The second character represents a first-level terrain descriptor specific to the general terrain type. The third character represents the material color. An example of this is illustrated in Figure 11 for scene #2 at the APG site.

Each mylar overlay was digitized; this involved several steps. Each overlay was scanned on a Scan Graphics CF500 Forward/44 at 300 dots/inch. The scanned file was converted to Hitachi raster format using ImageWork software. Raster files were then vectorized using CADCORE software on a personal computer. Vectorized files were transferred to a VAX 8800 computer and loaded into ARC-INFO geographic information software. Polygons within each overlay were interactively attributed within ARC-INFO. A hardcopy map was generated (using ARC-INFO) to verify the correctness of the ARC-INFO file against the original overlay. The last step was to convert the ARC-INFO file to an export format.

Various types of spatial information were extracted from the ARC-INFO export files using an SML-language (ARC-INFO utility language) program followed by a C-language program run on a personal computer. The outputs of these programs are a hardcopy summary report and an ASCII file

Table 4
Characterization of Terrain Types

Polygon Code: cnn

First Character: Terrain class

- M: Mountain
- R: Road
- T: Trees, Wooded Areas, Tall Vegetation
- L: Soil/Bare Ground
- S: Man-made Structure
- W: Water
- G: Grass/Short Vegetation
- Y: Sky

Second Character: First-level terrain descriptors

N	R	T	L
1. Barren 2. Sparse Vegetation	1. Paved 2. Gravel 3. Dirt	1. Leaves On 2. Leaves Off	1. Barren 2. Tilled 3. Dirt Mound 4. Rocky Terrain 5. Sandy Area
S	**W**	**G**	**Y**
1. Concrete 2. Telephone Pole 3. Target Board 4. Target Vehicle 5. Metal Pole 6. Unknown 7. Building 8. Water Tower 9. Sign	1. Open Water 2. Marshy Area	1. Short Field Grass 2. Tall Field Grass 3. Short Bushes 4. Mowed Grass 5. Vegetated Desert Wash	0. No Descriptor

Third Character: Material Color

1. Brown
2. Tan
3. White
4. Gray
5. Green
6. Silver
7. Blue
8. Sandy
9. Black

that contains the same information. A summary report for the scene shown in Figure 11 is contained in Table 5. Summary information for each scene included: total number of polygons within the FOV, number of different general terrain types, percent coverage of each general terrain type, total length of edges or polygon borders (output in inches but converted to degrees in the database), edge length by different terrain type combinations, number of target vehicles in the view, and whether the vegetation is active or dormant.

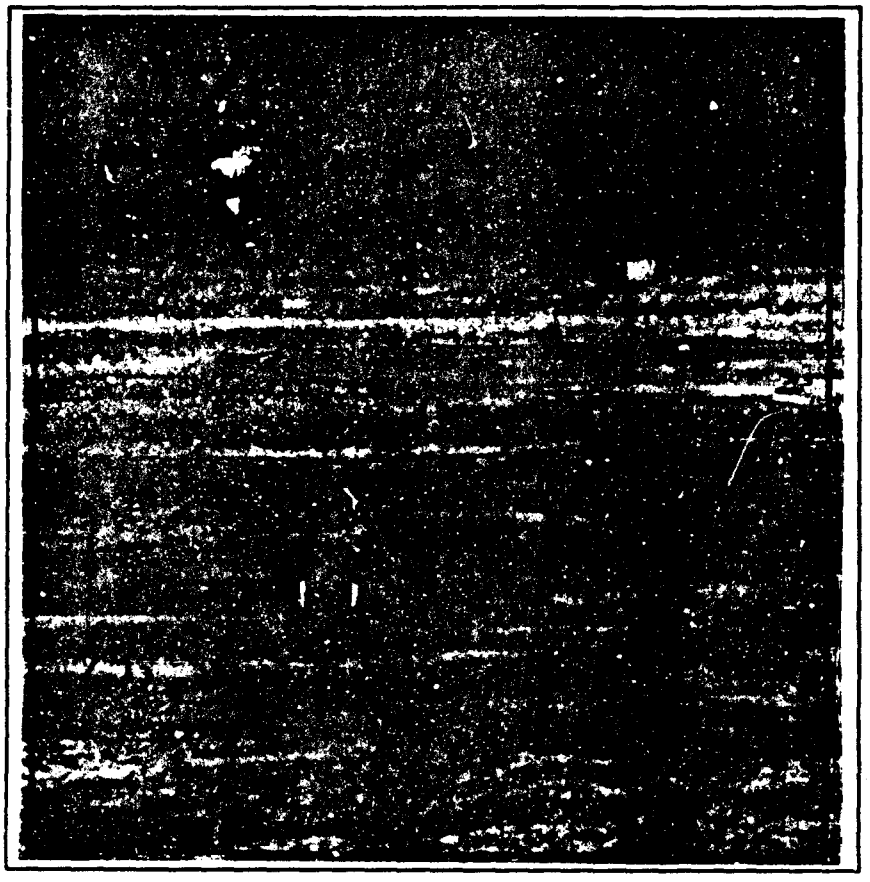


Figure 11. Example of photointerpreted scene (APG scene #2)

These summary data were placed into a SAS database for use in the scene analysis effort (Sabol and Rivera, In Preparation). Individual summary reports for each view are contained in the appendices by site, as is graphical comparison of selected attributes among views.

Table 5
Scene Content Output Report for Aberdeen Proving Ground, Scene #2

Record Number	Area or Object	Characteristic	Color	Polygon Area (sq in.)	Percentage of Area	Polygon Perimeter (inches)
2	Trees	Leaves Off	Brown	6.3227	28.39	12.0363
3	Grass	Short Field	Tan	2.2427	10.07	17.1122
4	Man-Made	Concrete	White	0.0303	0.14	0.7027
5	Road	Gravel	Gray	0.6154	2.76	14.4036
6	Grass	Tall Field	Tan	0.2984	1.34	4.5007
7	Grass	Short Field	Tan	0.4199	1.89	7.0135
8	Man-Made	Concrete	White	0.0041	0.02	0.3016
9	Water	Marshy Area	Tan	1.4820	6.65	11.8800
10	Water	Open Water	Blue	0.0352	0.16	1.5073
11	Man-Made	Metal Pole	White	0.0028	0.01	0.2232
12	Water	Open Water	Blue	0.0863	0.39	2.4416
13	Grass	Short Field	Tan	10.7057	48.07	15.0740
14	Man-Made	Metal Pole	White	0.0130	0.06	0.5596
15	Man-Made	Metal Pole	White	0.0126	0.06	0.5196

Number of Polygons: 14
Different Types of Objects: 5

Percentage of Area for Type Man-Made is 0.28%
Percentage of Area for Type Grass is 61.37%
Percentage of Area for Type Trees is 28.39%
Percentage of Area for Type Road is 2.76%
Percentage of Area for Type Water is 7.20%
Percentage of Area for Type Sky is 0.00%
Percentage of Area for Type Soil is 0.00%
Percentage of Area for Type Mountain is 0.00%

Total Edge Length: 34.6986 in.

	Linear Edges Between Types (inches)							
	Man-Made	Grass	Trees	Road	Water	Sky	Soil	Mountain
Man-Made	0.0000	1.8849	0.1986	0.0000	0.2232	0.0000	0.0000	0.0000
Grass	1.8849	4.2740	4.4634	11.4449	6.5532	0.0000	0.0000	0.0000
Trees	0.1986	4.4634	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Road	0.0000	11.4449	0.0000	0.0000	2.8078	0.0000	0.0000	0.0000
Water	0.2232	6.5532	0.0000	2.8078	2.8485	0.0000	0.0000	0.0000
Sky	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Soil	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mountain	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Number of Vehicles: 0

Green Vegetation Present: No

References

Curtis, J., and Sabol, B. (1992). "Environmental characterization for target acquisition; Report 3, new concepts for evaluating low-grazing radar measurements," Technical Report in preparation, U.S. Army Engineer Waterways Experiment Station, Vicksburg, MS.

Hahn, C. D., Hall, K. G., and Sabol, B. M. (1992). "Multi-sensor fusion demonstration, Fort Hunter-Liggett, CA, characterization and test report," Technical Report in preparation, U.S. Army Engineer Waterways Experiment Station, Vicksburg, MS.

Sabol, B., and Rivera, S. (1992). "Environmental characterization for target acquisition; Report 2, analysis of electro-optical imagery," Technical Report in preparation, U.S. Army Engineer Waterways Experiment Station, Vicksburg, MS.

U.S. Army Corps of Engineers. (1980). "Engineering and design laboratory soils testing," Engineering Manual 1110-2-1906, Washington, DC.

_____. (1991). "NAVSTAR global positioning system surveying," EM-1110-1-1003, Topographic Engineering Center, Washington DC.

U.S. Army Engineer Waterways Experiment Station. (1960). "The unified soil classification system," Technical Memorandum No. 3-357, Appendices A and B, Washington, DC.

Appendix A
Aberdeen Proving Ground, MD

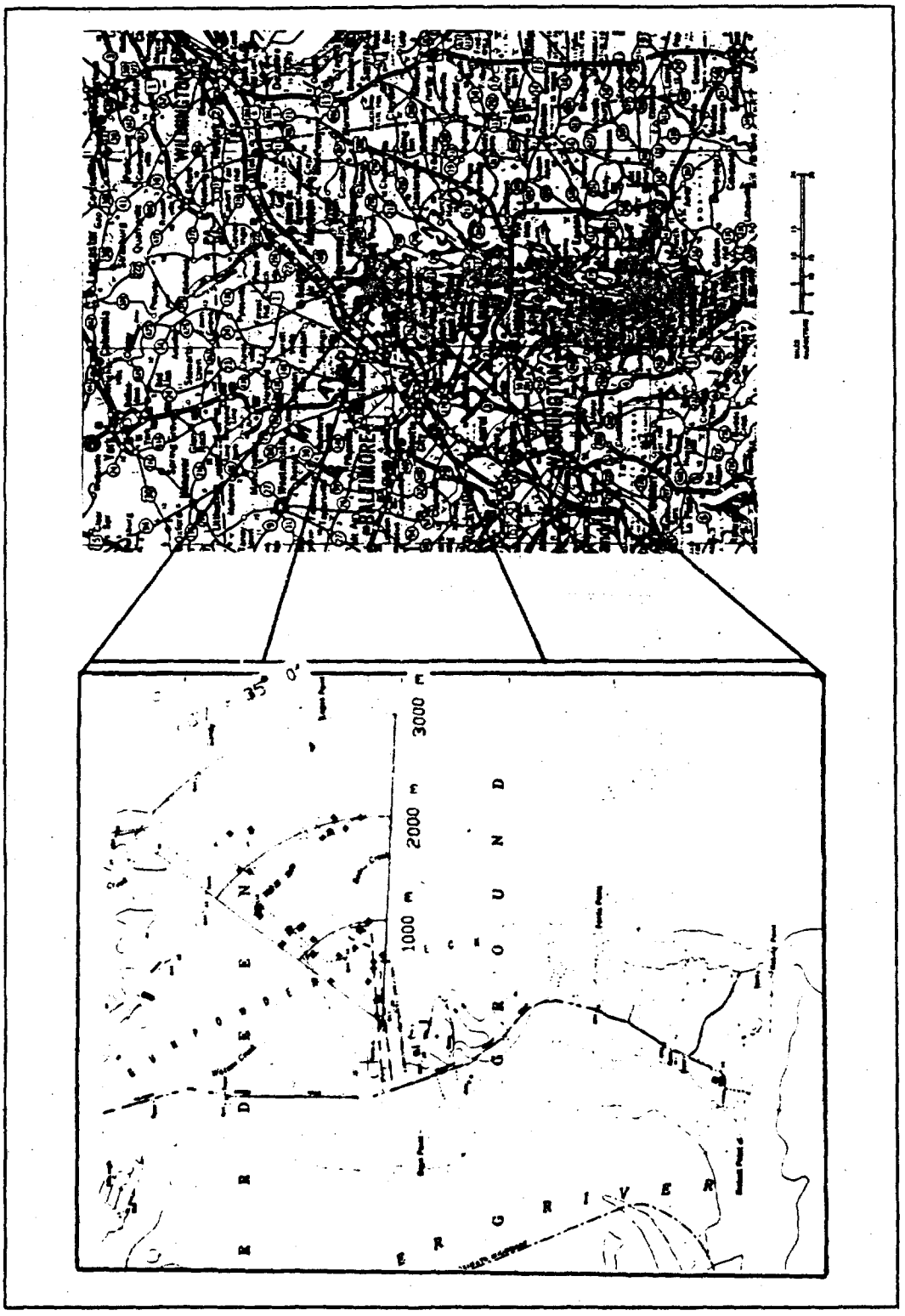
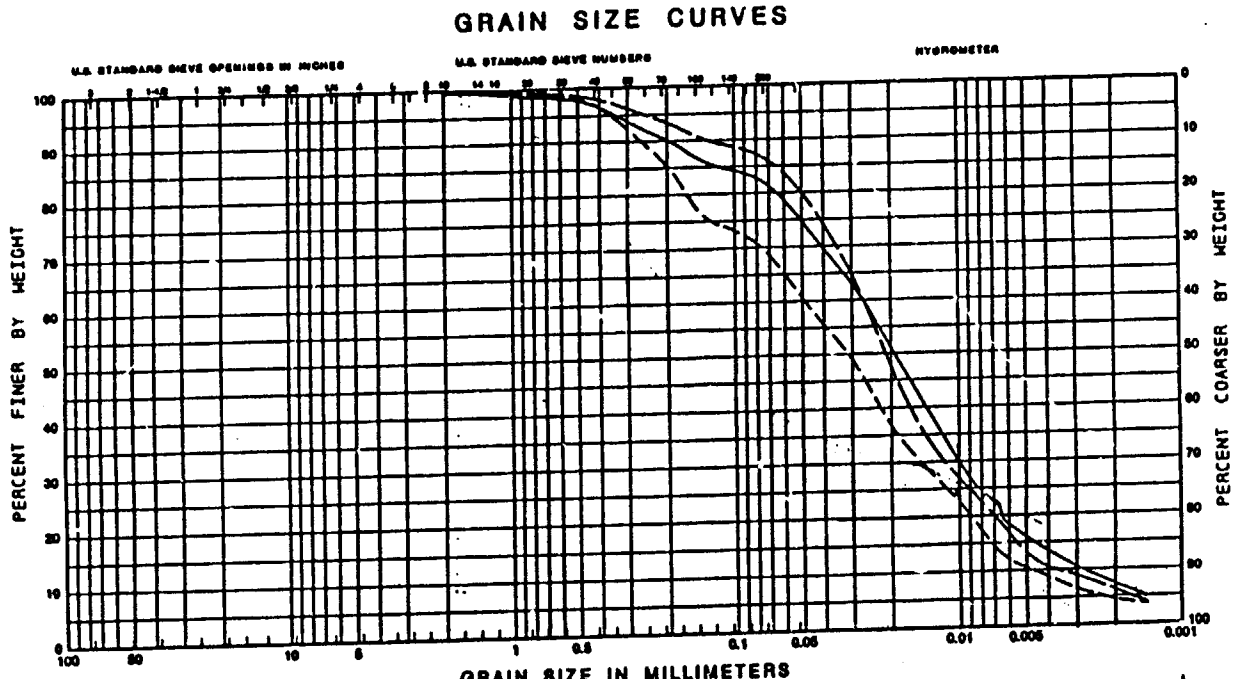


Figure A1. Site location and ground truth locations



GRAVEL	SAND			SILT	CLAY
	Course	Medium	Fine		

BORING NO.	SAMPLE NO.	Curve	CLASSIFICATION	WATER CONTENT %	ATTERBERG LIMITS LL	PL	PI	UNCONFINED COMPRESSION STRESS	STRAIN %	UNIT DRY WEIGHT LB/CU FT	CONSOLIDATION	ORGANIC ANALYSIS
1		———	Light gray organic silt (OL)		46	29	17					
2		— — —	Tan organic silt, slightly sandy w/ organics (OL)		36	29	7					
3		- - - - -	Tan organic silt, slightly sandy w/ organics (OL)		32	26	6					

Figure A2. Soils laboratory report

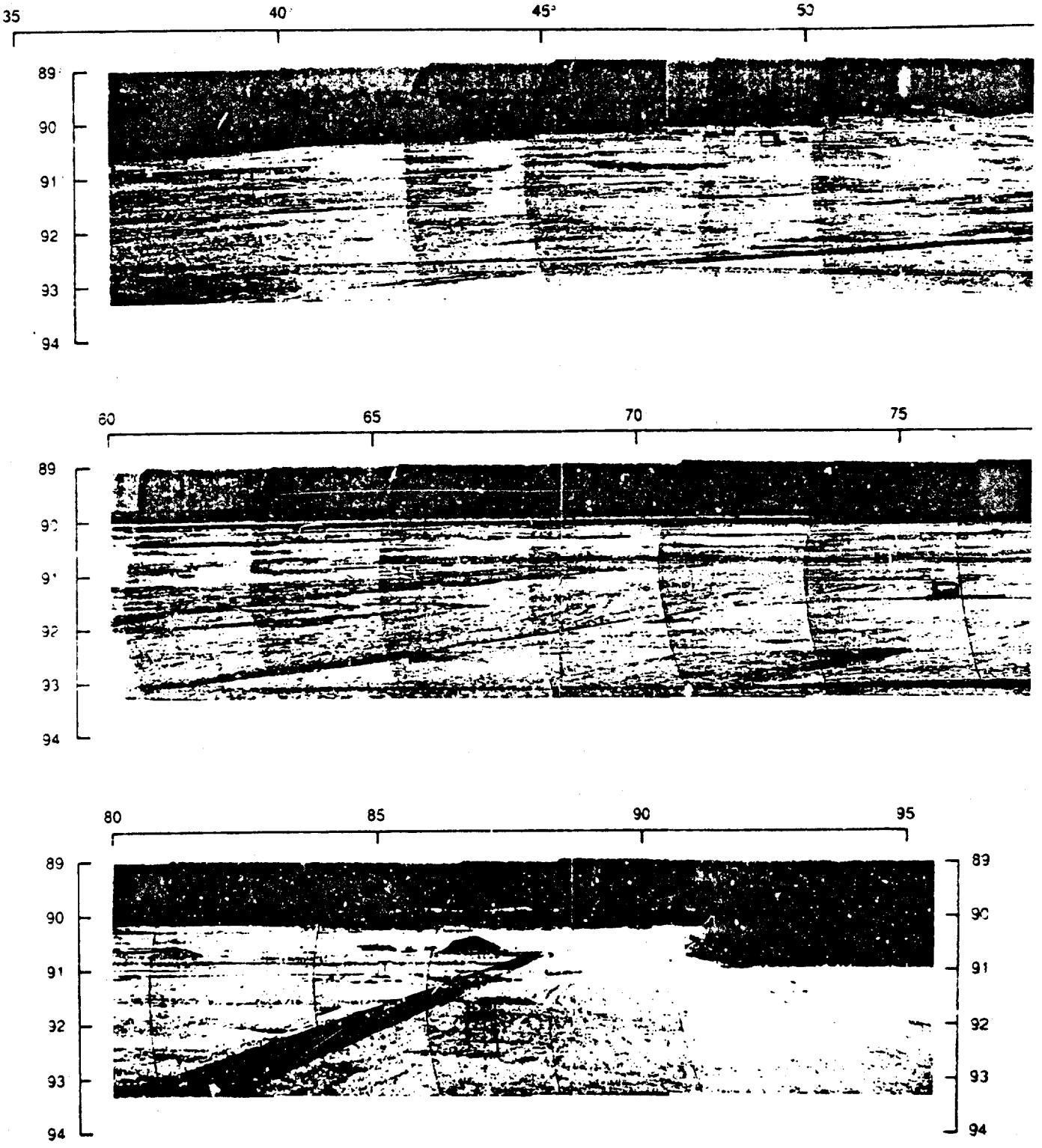
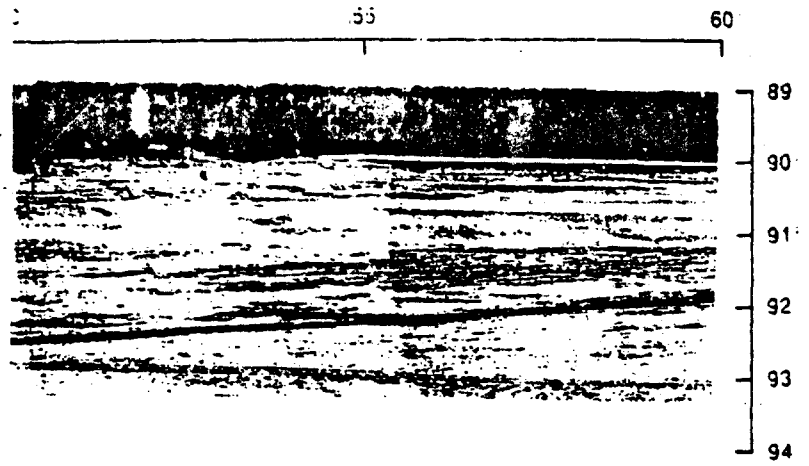


Figure A3. Mosaic photography, March 1991


55
60
89
90
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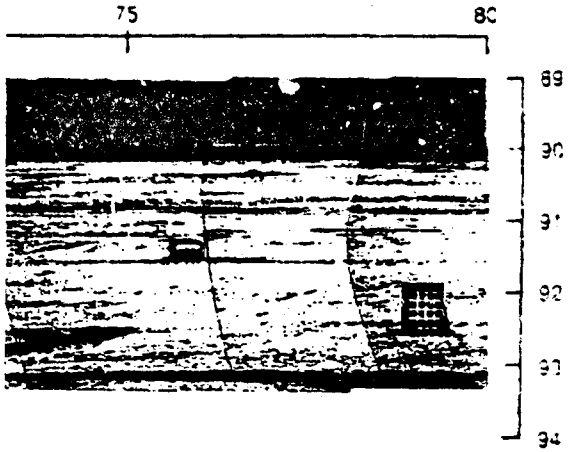
92
93
94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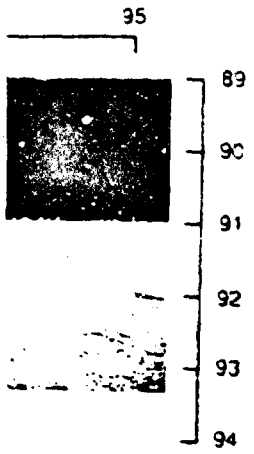
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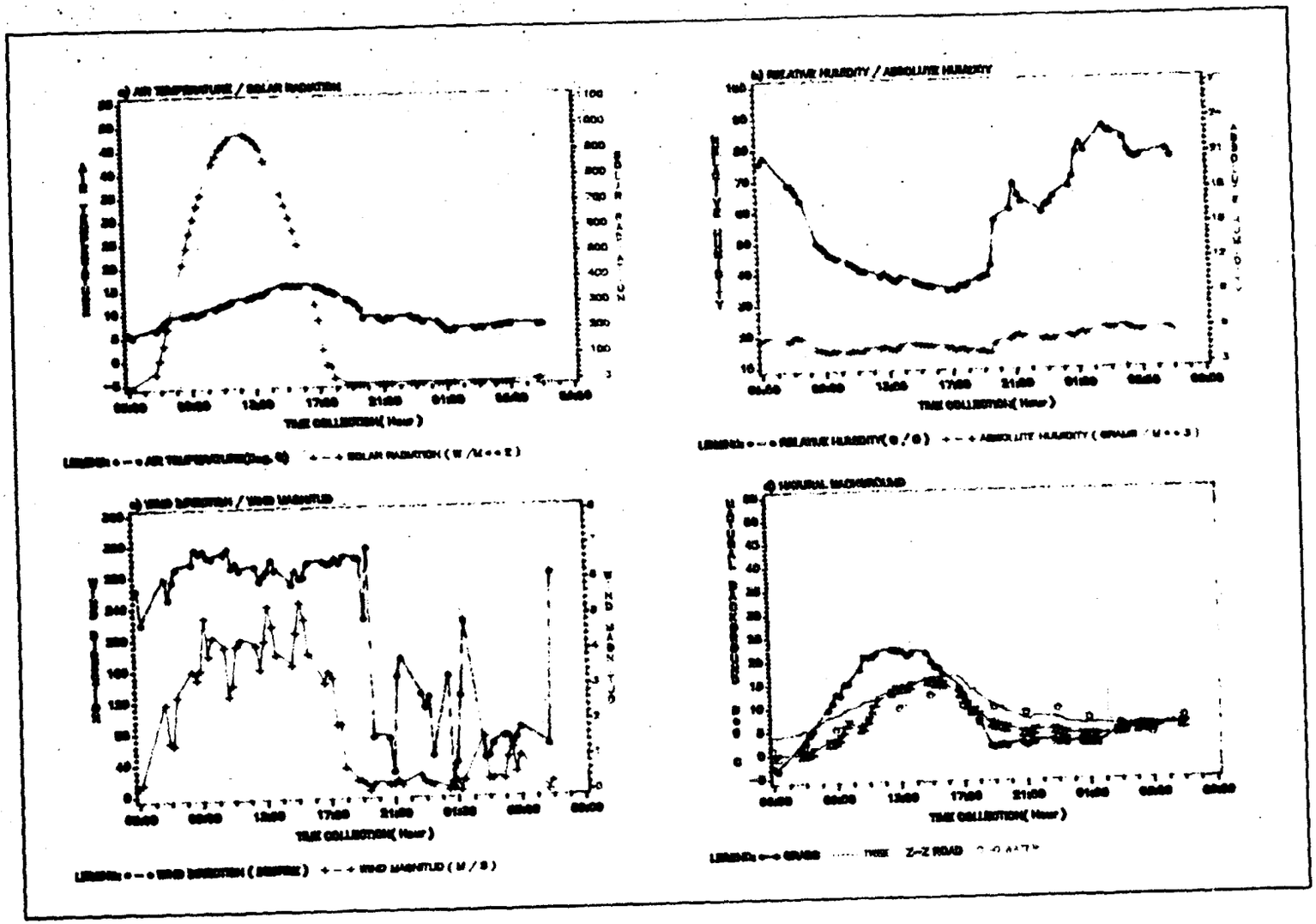


Figure A4. Diurnal meterological conditions, 20-21 March 1991

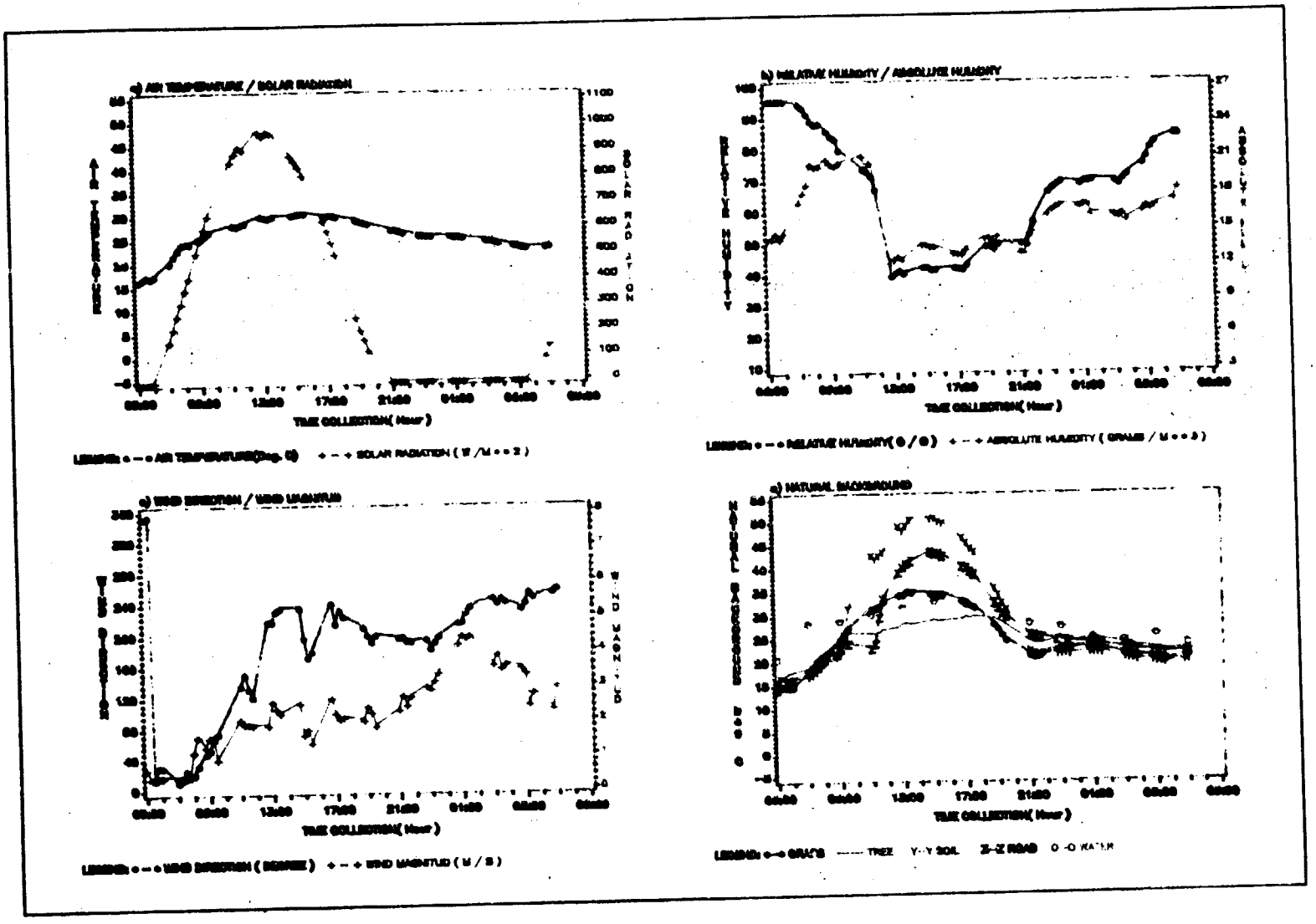


Figure A5. Diurnal meterological conditions, 16-17 July 1991

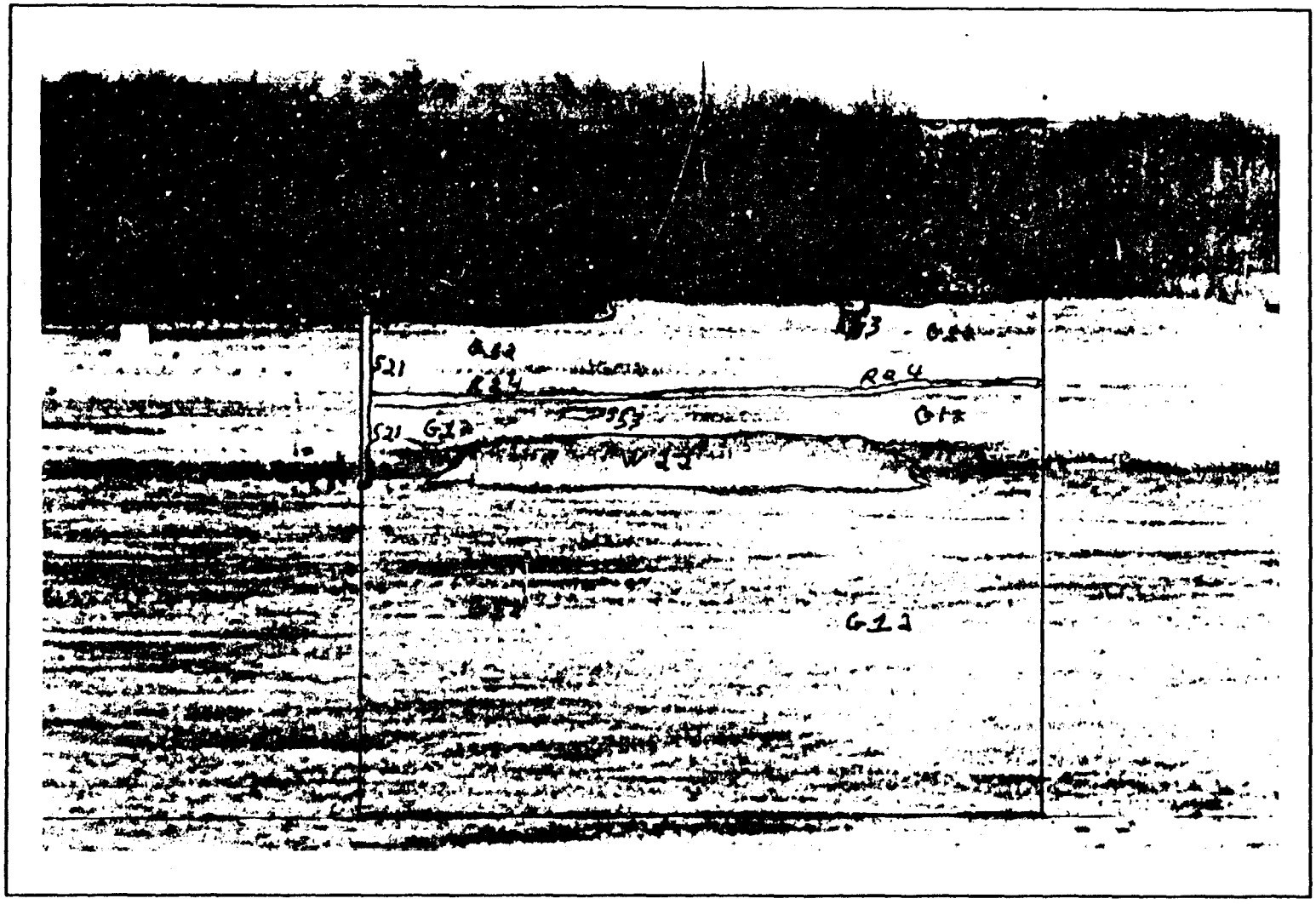


Figure A6. Photointerpretation of scene #3, March 1991

Table A1
Topographic Survey and Sampling Locations at APG

TYPE OF MEASUREMENT	VIEW	AZIMUTH ANGLE	ELEVATION ANGLE	SURVEYED RANGE (M)	PASSIVE RANGE (M)	UTM EASTING	UTM NORTHING	ELEVATION (M)
camera pointing angle	1	37.000	91.175	.	560	.	.	.
camera pointing angle	2	39.500	91.175	.	550	.	.	.
camera pointing angle	3	42.000	91.175	.	560	.	.	.
camera pointing angle	4	44.500	91.175	.	550	.	.	.
camera pointing angle	5	47.000	91.175	.	560	.	.	.
camera pointing angle	6	49.500	91.175	.	550	.	.	.
camera pointing angle	7	52.000	91.175	.	550	.	.	.
camera pointing angle	8	54.500	91.175	.	560	.	.	.
camera pointing angle	9	57.000	91.175	.	550	.	.	.
camera pointing angle	10	59.500	91.175	.	550	.	.	.
camera pointing angle	11	62.000	91.175	.	550	.	.	.
camera pointing angle	12	64.500	91.175	.	550	.	.	.
camera pointing angle	13	67.000	91.175	.	550	.	.	.
camera pointing angle	14	69.500	91.175	.	550	.	.	.
camera pointing angle	15	72.000	91.175	.	560	.	.	.
camera pointing angle	16	74.500	91.175	.	560	.	.	.
camera pointing angle	17	77.000	91.175	.	560	.	.	.
camera pointing angle	18	79.500	91.175	.	550	.	.	.
camera pointing angle	19	82.000	91.175	.	550	.	.	.
camera pointing angle	20	84.500	91.175	.	560	.	.	.
camera pointing angle	21	87.000	91.175	.	560	.	.	.
camera pointing angle	22	89.500	91.175	.	560	.	.	.
surveyed point	.	40.201	90.626	1231.40	.	89735.30	55168.99	1.930
surveyed point	.	41.011	91.058	633.92	.	89356.42	54706.80	3.689
surveyed point	.	42.856	90.506	1568.73	.	90007.44	55378.47	1.482
surveyed point	.	45.213	90.449	1629.21	.	90096.77	55376.23	2.636
surveyed point	.	46.234	90.784	934.72	.	89615.48	54875.03	2.600
surveyed point	.	46.344	90.653	939.57	.	89620.24	54877.10	4.679
surveyed point	.	46.468	90.590	1281.52	.	89869.56	55111.14	2.190
surveyed point	.	46.962	90.604	1258.91	.	89860.60	55087.67	2.130
surveyed point	.	48.645	90.302	2022.01	.	90458.26	55564.50	4.726
surveyed point	.	49.166	96.149	85.57	.	89004.89	54284.16	6.226
surveyed point	.	49.886	90.432	1681.35	.	90226.32	55311.80	2.717
surveyed point	.	50.397	90.357	1943.18	.	90437.67	55467.22	3.296
surveyed point	.	50.501	90.544	1219.56	.	89881.53	55004.21	3.821
surveyed point	.	50.543	90.657	1213.77	.	89877.61	54999.82	1.475

(Continued)

Table A1 (Concluded)

TYPE OF MEASUREMENT	VIEW	AZIMUTH ANGLE	ELEVATION ANGLE	SURVEYED RANGE (M)	PASSIVE RANGE (M)	UTM EASTING	UTM NORTHING	ELEVATION (M)
surveyed point	.	51.633	90.449	1675.54	.	90254.18	55268.51	2.257
surveyed point	.	51.936	90.756	1046.99	.	89764.75	54873.99	1.581
surveyed point	.	52.410	90.658	1213.58	.	89902.09	54968.77	1.448
surveyed point	.	52.864	90.323	2354.91	.	90817.84	55650.17	2.114
surveyed point	.	54.764	90.407	1691.54	.	90322.10	55204.43	3.378
surveyed point	.	54.780	90.459	1688.43	.	90319.82	55202.24	1.861
surveyed point	.	57.506	90.289	2261.10	.	90847.62	55443.19	3.980
surveyed point	.	57.531	90.351	2256.72	.	90844.42	55440.02	1.552
surveyed point	.	58.594	90.902	772.83	.	89600.04	54631.20	3.230
surveyed point	.	59.563	90.470	1706.25	.	90411.56	55092.88	1.396
surveyed point	.	61.674	90.460	1741.82	.	90473.72	55054.99	1.408
surveyed point	.	71.678	90.904	767.93	.	89669.42	54469.91	3.270
surveyed point	.	72.781	91.432	421.31	.	89342.82	54353.21	4.251
surveyed point	.	73.818	90.429	1885.55	.	90751.31	54753.99	1.269
surveyed point	.	75.995	92.285	231.95	.	89165.39	54284.62	6.143
surveyed point	.	76.220	90.322	1925.20	.	90819.27	54687.10	4.565
surveyed point	.	76.297	90.411	1918.65	.	90804.51	54683.02	1.644
surveyed point	.	77.254	90.221	2764.94	.	91637.30	54838.53	4.722
surveyed point	.	77.347	90.285	2752.92	.	91626.54	54831.55	1.685
surveyed point	.	78.271	90.604	941.19	.	89862.00	54419.85	5.463
surveyed point	.	78.456	90.810	923.11	.	89844.86	54413.25	2.342
surveyed point	.	80.841	90.393	1917.54	.	90833.56	54533.76	2.247
surveyed point	.	82.342	91.106	533.52	.	89469.17	54299.61	5.090
surveyed point	.	83.555	91.144	597.18	.	89533.80	54295.55	3.468
surveyed point	.	83.789	90.772	987.92	.	89922.55	54335.41	2.077
surveyed point	.	84.018	90.463	1000.36	.	89935.39	54332.78	7.312
surveyed point	.	84.137	92.288	240.05	.	89179.12	54253.03	5.807
surveyed point	.	91.807	91.013	656.20	.	89596.28	54207.84	3.797
soil sample #1	.	.	.	.	.	89563.79	54198.95	2.570
soil sample #2	.	.	.	.	.	89769.38	54902.00	1.390
soil sample #3	.	.	.	.	.	90600.22	54930.56	2.250
camera position	.	.	.	.	.	88940.51	54228.53	15.390

Table A2
Vegetation and Soil Moisture Data

Vegetation		
	March (Dormant)	**July (Active)**
Trees: deciduous	17 to 18 m	17 to 18 m
coniferous	none	none
Grass: tall	2.2 to 3.0 m	2.0 to 3.0 m
short	0.15 m	0.20 to 0.30 m
Scrub/Bushes	none	none
Soil Moisture		
	March	**July**
Location	1 2 3	1 2 3
% Moisture	19% 10% 17%	10% 4% 10%

able A3
leterological and Radiometric Data

AY AND TIME OF COLLECTION	VISITED SITE	AIR TEMP. (C)	SOLAR RADIATION (W/M**2)	WIND MAGNITUD (M/S)	WIND DIRECTION (DEGREES)	RELATIVE HUMIDITY (PERCENT)	BCKGND GRASS (C)	BCKGND BUSH (C)	BCKGND TREE (C)	BCKGND SOIL (C)	BCKGND ROAD (C)
9MAR91:10:15	APG	9.79	792.00	6.00	287.30	62.89	.	.	.	.	.
9MAR91:10:30	APG	10.41	871.00	6.28	292.20	60.53	.	.	.	.	.
9MAR91:10:45	APG	10.83	785.00	6.09	289.60	58.75	.	.	.	.	.
9MAR91:11:00	APG	11.11	740.00	5.67	296.40	56.97	.	.	.	.	.
9MAR91:11:15	APG	11.42	891.00	6.91	300.50	52.82	.	.	.	.	.
9MAR91:11:30	APG	11.68	832.00	6.29	298.50	51.07	.	.	.	.	.
9MAR91:11:45	APG	11.89	897.00	6.68	296.00	49.50	.	.	.	.	.
9MAR91:12:00	APG	11.84	902.00	6.60	301.80	48.17	.	.	.	.	.
9MAR91:12:15	APG	12.06	881.00	6.90	298.50	47.55	.	.	.	.	.
9MAR91:12:30	APG	12.40	999.00	7.26	296.70	46.29	.	.	.	.	.
9MAR91:12:45	APG	12.64	991.00	7.18	293.80	45.44	.	.	.	.	.
9MAR91:13:00	APG	12.80	797.00	6.08	299.60	45.43	.	.	.	.	.
9MAR91:13:15	APG	12.87	687.00	6.54	294.00	45.25	.	.	.	.	.
9MAR91:13:30	APG	13.05	794.00	7.09	301.40	44.18	.	.	.	.	.
9MAR91:13:45	APG	12.94	777.00	7.03	311.80	43.83	.	.	.	.	.
9MAR91:14:00	APG	13.55	825.00	6.72	281.30	44.31	14.75	.	.	.	.
9MAR91:14:15	APG	13.67	776.00	7.67	276.00	43.84	15.90	.	.	.	.
9MAR91:14:30	APG	13.36	621.40	7.07	279.80	44.23	14.44	.	12.81	.	11.42
9MAR91:14:45	APG	13.21	543.70	7.84	286.20	43.44	15.52	.	12.51	.	10.52
9MAR91:15:00	APG	12.94	562.10	7.76	297.10	42.70	16.11	.	12.97	.	10.21
9MAR91:15:15	APG	13.27	752.00	8.84	283.30	42.14	16.05	.	13.39	.	10.97
9MAR91:15:30	APG	12.94	596.60	8.85	275.50	42.68	14.04	.	13.13	.	10.76
9MAR91:15:45	APG	12.47	290.30	7.06	291.40	43.40	10.64	.	11.29	.	8.91
9MAR91:16:00	APG	11.59	153.10	7.92	282.90	44.14	10.21	.	10.62	.	8.51
9MAR91:16:15	APG	11.15	138.00	7.38	285.20	44.99	10.26	.	10.62	.	8.18
9MAR91:16:30	APG	10.94	107.60	7.84	276.50	45.40	9.95	.	10.31	.	7.82
9MAR91:16:45	APG	10.76	88.60	8.01	283.60	45.35	9.73	.	10.13	.	7.54
9MAR91:17:00	APG	10.58	49.89	5.62	280.10	46.39	9.23	.	9.94	.	7.43
9MAR91:17:15	APG	10.39	51.88	6.47	275.30	47.22	9.19	.	9.78	.	7.22
9MAR91:17:30	APG	10.38	84.10	6.83	275.70	48.50	9.47	.	9.88	.	7.22
9MAR91:17:45	APG	9.97	31.49	7.99	280.20	49.54	7.45	.	8.82	.	5.49
9MAR91:18:00	APG	9.48	15.25	6.83	281.80	51.24	6.88	.	8.51	.	5.26
9MAR91:18:15	APG	9.30	7.04	6.29	280.00	52.54	7.31	.	8.49	.	5.60
9MAR91:18:30	APG	9.12	1.62	7.04	281.50	53.14	6.85	.	8.20	.	5.03
9MAR91:18:45	APG	8.97	0.56	6.55	285.10	53.80	6.93	.	8.12	.	5.27
9MAR91:19:00	APG	8.90	0.44	5.90	286.90	54.33	6.52	.	7.92	.	4.79
9MAR91:19:15	APG	8.84	0.36	5.87	286.40	53.97	5.91	.	7.78	.	4.40
9MAR91:19:30	APG	8.70	0.34	4.76	282.00	54.17	6.00	.	7.76	.	4.55
9MAR91:19:45	APG	8.60	0.41	4.28	269.40	54.54	6.14	.	7.75	.	4.61
9MAR91:20:00	APG	8.56	0.41	5.01	273.00	55.13	5.93	.	7.61	.	4.06
9MAR91:20:15	APG	8.51	0.48	5.37	280.50	55.13	5.88	.	7.56	.	3.93
9MAR91:20:30	APG	8.49	0.44	6.33	277.80	54.58	5.96	.	7.54	.	3.92
9MAR91:20:45	APG	8.48	0.39	5.42	274.80	54.26	6.44	.	7.73	.	4.36
9MAR91:21:00	APG	8.40	0.51	5.39	277.80	54.20	5.42	.	7.30	.	3.49
9MAR91:21:15	APG	8.29	0.32	5.39	280.80	54.09	4.49	.	6.97	.	2.52
9MAR91:21:30	APG	8.15	0.22	4.76	278.10	54.20	3.99	.	6.70	.	2.29
9MAR91:21:45	APG	7.96	0.27	3.89	275.70	54.71	3.66	.	6.59	.	2.05
9MAR91:22:00	APG	7.83	0.19	3.48	277.50	54.86	2.58	.	5.64	.	1.92
9MAR91:22:15	APG	7.72	0.39	3.25	265.10	55.34	2.50	.	5.53	.	1.61
9MAR91:22:30	APG	7.57	0.41	3.35	265.00	56.10	3.03	.	5.68	.	1.55
9MAR91:22:45	APG	7.70	0.24	4.20	271.20	56.08	4.04	.	6.01	.	2.49

(Continued)

Table A3 (Continued)

DAY AND TIME OF COLLECTION	VISITED SITE	AIR TEMP. (C)	SOLAR RADIATION (W/M**2)	WIND MAGNITUD (M/S)	WIND DIRECTION (DEGREES)	RELATIVE HUMIDITY (PERCENT)	BCKGND GRASS (C)	BCKGND BUSH (C)	BCKGND TREE (C)	BCKGND SOIL (C)	BCKGND ROAD (C)
19MAR91:23:00	APG	7.83	0.34	4.69	269.80	55.98	4.66	.	6.04	.	2.54
19MAR91:23:15	APG	7.81	0.34	4.02	268.00	56.39	4.96	.	6.14	.	3.22
19MAR91:23:30	APG	7.89	0.34	3.77	258.20	56.79	5.17	.	6.43	.	3.05
19MAR91:23:45	APG	7.97	0.27	3.81	256.50	57.33	6.45	.	7.34	.	4.22
20MAR91:00:00	APG	8.02	0.17	4.34	256.70	57.36	5.98	.	7.16	.	3.71
20MAR91:00:15	APG	7.74	0.34	4.17	267.30	58.71	3.79	.	6.28	.	1.95
20MAR91:00:30	APG	7.50	0.32	2.83	266.50	60.04	2.43	.	5.32	.	1.59
20MAR91:00:45	APG	7.35	0.24	3.11	271.60	61.95	2.27	.	5.32	.	1.37
20MAR91:01:00	APG	7.52	0.39	4.32	264.60	62.18	3.35	.	5.61	.	1.52
20MAR91:01:15	APG	7.47	0.14	3.73	267.30	62.94	3.28	.	5.55	.	1.45
20MAR91:01:30	APG	7.64	0.12	4.19	258.70	63.90	3.75	.	5.68	.	1.57
20MAR91:01:45	APG	7.68	0.24	3.78	265.50	64.56	3.65	.	5.68	.	1.67
20MAR91:02:00	APG	7.51	0.24	3.41	256.00	64.75	3.31	.	5.55	.	1.53
20MAR91:02:15	APG	7.49	0.24	3.49	253.20	65.00	3.29	.	5.46	.	1.45
20MAR91:02:30	APG	7.28	0.27	2.27	242.40	65.69	2.54	.	5.26	.	1.27
20MAR91:02:45	APG	7.09	0.24	1.88	247.60	66.79	1.98	.	5.17	.	1.17
20MAR91:03:00	APG	7.20	0.19	3.08	254.00	67.71	2.06	.	5.04	.	0.99
20MAR91:03:15	APG	7.10	0.17	2.30	264.10	68.97	2.31	.	4.90	.	0.97
20MAR91:03:30	APG	6.97	0.24	2.06	258.80	69.84	1.26	.	5.28	.	0.84
20MAR91:03:45	APG	6.84	0.39	0.75	251.70	71.40	0.24	.	5.16	.	0.66
20MAR91:04:00	APG	6.67	0.29	0.62	261.30	72.60	0.12	.	5.34	.	0.68
20MAR91:04:15	APG	6.72	0.29	1.37	254.20	73.50	-0.58	.	5.09	.	0.48
20MAR91:04:30	APG	6.52	0.34	0.49	252.00	74.30	-1.75	.	4.93	.	0.36
20MAR91:04:45	APG	6.32	0.22	0.42	241.60	76.10	-2.02	.	4.41	.	0.38
20MAR91:05:00	APG	6.16	0.12	0.34	265.50	76.50	-2.32	.	4.03	.	-0.01
20MAR91:05:15	APG	5.56	0.39	0.44	223.00	78.20	-2.94	.	4.04	.	-0.09
20MAR91:05:30	APG	5.22	0.41	0.43	236.50	80.50	-3.25	.	3.95	.	-0.52
20MAR91:05:45	APG	5.30	0.22	0.44	257.10	81.60	-3.56	.	4.39	.	-0.55
20MAR91:06:00	APG	5.36	0.82	0.44	257.10	80.30	-3.52	.	4.52	.	-0.46
20MAR91:06:15	APG	5.36	5.19	0 93	280.90	79.00	-2.30	.	4.73	.	-0.56
20MAR91:06:30	APG	6.13	20.14	3.29	292.10	73.90	0.95	.	4.89	.	0.06
20MAR91:06:45	APG	7.02	54.42	2.69	279.50	69.13	2.14	.	4.82	.	0.29
20MAR91:07:00	APG	7.70	109.50	1.61	254.00	68.72	3.14	.	5.28	.	0.33
20MAR91:07:15	APG	8.68	165.60	1.53	276.30	66.79	4.64	.	5.15	.	0.66
20MAR91:07:30	APG	9.23	228.30	2.90	292.10	64.33	5.64	.	5.77	.	1.15
20MAR91:07:45	APG	9.29	293.80	3.31	296.10	60.20	6.94	.	6.42	.	1.61
20MAR91:08:00	APG	9.61	360.00	3.07	292.70	55.61	7.88	.	7.06	.	1.73
20MAR91:08:15	APG	9.98	422.80	3.33	288.00	53.64	9.61	.	7.43	.	2.28
20MAR91:08:30	APG	9.98	485.90	3.63	298.00	50.59	9.95	.	8.12	.	2.85
20MAR91:08:45	APG	9.98	548.20	3.38	317.00	49.32	11.37	.	8.19	.	2.66
20MAR91:09:00	APG	10.34	606.90	3.65	311.80	48.16	13.23	.	8.54	.	3.10
20MAR91:09:15	APG	10.18	662.80	5.13	315.60	46.52	12.96	.	8.68	.	3.79
20MAR91:09:30	APG	10.53	715.00	4.04	306.70	45.78	15.26	.	9.14	.	5.70
20MAR91:09:45	APG	10.76	758.00	4.57	304.80	45.40	15.54	.	9.81	.	6.90
20MAR91:10:00	APG	10.95	802.00	4.19	310.70	44.66	17.63	.	9.83	.	6.66
20MAR91:10:15	APG	11.13	839.00	4.09	306.10	44.41	17.53	.	10.11	.	5.93
20MAR91:10:30	APG	11.46	877.00	4.28	310.70	43.71	18.41	.	10.51	.	5.70
20MAR91:10:45	APG	12.05	907.00	2.89	317.10	43.30	21.12	.	11.32	.	6.18
20MAR91:11:00	APG	12.19	936.00	3.21	292.20	42.52	21.07	.	11.45	.	7.76
20MAR91:11:15	APG	12.49	954.00	4.31	297.60	41.17	21.16	.	11.65	.	9.93
20MAR91:11:30	APG	12.86	971.00	4.48	288.80	40.97	21.77	.	12.31	.	11.19

(Continued)

Table A3 (Continued)

DAY AND TIME OF COLLECTION	VISITED SITE	AIR TEMP. (C)	SOLAR RADIATION (W/M**2)	WIND MAGNITUD (M/S)	WIND DIRECTION (DEGREES)	RELATIVE HUMIDITY (PERCENT)	BCKGND GRASS (C)	BCKGND BUSH (C)	BCKGND TREE (C)	BCKGND SOIL (C)	BCKGND ROAD (C)
20MAR91:11:45	APG	12.97	984.00	3.82	304.30	40.55	22.16	.	12.59	.	12.08
20MAR91:12:00	APG	13.28	996.00	4.69	274.70	40.47	22.15	.	13.14	.	12.83
20MAR91:12:15	APG	13.41	1000.00	5.02	297.60	39.48	21.51	.	12.71	.	12.42
20MAR91:12:30	APG	13.53	989.00	4.31	292.90	39.29	22.61	.	13.53	.	13.39
20MAR91:12:45	APG	13.74	980.00	3.64	275.10	40.32	22.46	.	14.12	.	14.08
20MAR91:13:00	APG	14.20	971.00	4.45	282.20	39.44	22.43	.	14.17	.	14.12
20MAR91:13:15	APG	14.41	955.00	5.43	287.60	38.35	22.16	.	14.20	.	14.20
20MAR91:13:30	APG	14.42	933.00	4.86	301.50	37.75	21.27	.	14.42	.	14.22
20MAR91:13:45	APG	15.02	885.00	4.03	288.20	38.78	21.93	.	14.78	.	14.88
20MAR91:14:00	APG	15.33	869.00	4.14	281.80	38.17	23.10	.	15.32	.	15.37
20MAR91:14:15	APG	15.44	839.00	4.58	285.10	37.53	22.39	.	15.79	.	15.51
20MAR91:14:30	APG	15.69	798.00	3.55	293.20	37.66	21.38	.	15.96	.	15.77
20MAR91:14:45	APG	16.12	755.00	3.74	270.00	37.37	21.76	.	16.25	.	15.74
20MAR91:15:00	APG	16.26	710.00	4.67	286.80	36.63	19.96	.	16.44	.	15.70
20MAR91:15:15	APG	16.04	660.70	5.51	277.30	36.14	18.81	.	16.35	.	15.26
20MAR91:15:30	APG	16.18	610.80	5.05	278.90	35.81	18.57	.	16.44	.	15.26
20MAR91:15:45	APG	16.20	556.60	4.06	296.80	35.92	17.25	.	16.83	.	14.96
20MAR91:16:00	APG	16.07	499.70	4.44	288.30	35.13	16.64	.	16.55	.	14.47
20MAR91:16:15	APG	15.96	439.50	4.33	298.90	34.51	15.87	.	16.72	.	14.06
20MAR91:16:30	APG	15.91	377.30	4.26	296.00	34.67	14.83	.	16.43	.	13.37
20MAR91:16:45	APG	15.92	316.80	3.22	298.50	34.61	14.24	.	16.47	.	12.80
20MAR91:17:00	APG	15.74	254.70	3.54	295.20	34.62	12.93	.	15.86	.	11.65
20MAR91:17:15	APG	15.42	139.60	3.36	296.70	34.67	11.07	.	14.89	.	10.49
20MAR91:17:30	APG	14.76	78.80	2.04	302.50	35.94	9.04	.	13.70	.	9.15
20MAR91:17:45	APG	14.64	73.10	2.04	296.40	35.84	9.13	.	13.79	.	9.09
20MAR91:18:00	APG	14.22	27.10	0.79	304.30	36.56	6.76	.	12.51	.	8.05
20MAR91:18:15	APG	13.79	6.21	1.00	314.30	37.03	4.84	.	11.68	.	7.28
20MAR91:18:30	APG	13.42	0.44	0.43	310.60	37.45	2.80	.	11.36	.	6.89
20MAR91:18:45	APG	12.89	0.00	0.44	302.70	38.21	1.80	.	10.91	.	6.47
20MAR91:19:00	APG	12.62	0.00	0.44	301.20	38.86	1.50	.	10.45	.	6.04
20MAR91:19:15	APG	12.04	0.00	0.36	225.80	39.38	1.68	.	9.75	.	5.84
20MAR91:19:30	APG	10.91	0.00	0.16	316.40	42.78	1.99	.	9.53	.	5.63
20MAR91:19:45	APG	8.90	0.00	0.33	74.30	57.34	1.74	.	9.03	.	5.44
20MAR91:20:00	APG	9.98	0.00	0.41	101.40	49.75	2.27	.	8.89	.	5.30
20MAR91:20:15	APG	10.34	0.00	0.32	108.20	47.68	1.75	.	8.63	.	4.94
20MAR91:20:30	APG	9.67	0.00	0.45	118.20	51.58	2.18	.	8.10	.	4.73
20MAR91:20:45	APG	8.91	0.00	0.32	72.90	60.92	2.40	.	7.66	.	4.41
20MAR91:21:00	APG	8.27	0.00	0.31	29.63	69.04	1.88	.	7.20	.	4.29
20MAR91:21:15	APG	8.77	0.00	0.43	151.30	65.43	2.27	.	7.14	.	4.28
20MAR91:21:30	APG	8.68	0.00	0.29	173.50	63.16	2.40	.	7.73	.	4.74
20MAR91:21:45	APG	8.61	0.00	0.44	125.30	62.43	2.97	.	7.95	.	4.97
20MAR91:22:00	APG	8.77	0.00	0.34	89.20	62.53	2.99	.	7.90	.	5.09
20MAR91:22:15	APG	8.99	0.00	0.48	121.00	61.23	2.67	.	7.58	.	4.94
20MAR91:22:30	APG	8.78	0.00	0.41	110.10	61.04	2.75	.	7.64	.	4.85
20MAR91:22:45	APG	9.08	0.00	0.56	128.20	59.61	2.68	.	7.58	.	4.7[illegible]
20MAR91:23:00	APG	8.62	0.00	0.39	110.80	61.81	2.13	.	7.17	.	4.48
20MAR91:23:15	APG	8.48	0.00	0.34	125.40	62.58	2.35	.	7.03	.	4.14
20MAR91:23:30	APG	7.84	0.00	0.28	49.76	64.63	2.09	.	6.51	.	4.01
20MAR91:23:45	APG	7.95	0.00	0.35	17.30	64.32	2.27	.	6.16	.	4.08
21MAR91:00:00	APG	7.09	0.00	0.35	30.14	68.67	2.76	.	6.16	.	3.89
21MAR91:00:15	APG	7.15	0.00	0.73	189.00	71.20	2.74	.	5.92	.	3.58

(Continued)

Table A3 (Continued)

DAY AND TIME OF COLLECTION	VISITED SITE	AIR TEMP. (C)	SOLAR RADIATION (W/M**2)	WIND MAGNITUD (M/S)	WIND DIRECTION (DEGREES)	RELATIVE HUMIDITY (PERCENT)	BCKGND GRASS (C)	BCKGND BUSH (C)	BCKGND TREE (C)	BCKGND SOIL (C)	BCKGND ROAD (C)
21MAR91:00:30	APG	7.70	0.00	0.15	151.80	67.91	1.99	.	6.05	.	3.67
21MAR91:00:45	APG	6.78	0.00	0.38	8.07	71.10	2.11	.	6.01	.	3.64
21MAR91:01:00	APG	5.97	0.00	0.40	40.36	78.80	2.06	.	6.22	.	3.73
21MAR91:01:15	APG	5.82	0.00	0.11	125.80	81.40	1.89	.	6.09	.	3.51
21MAR91:01:30	APG	6.20	0.00	0.42	221.20	79.20	1.87	.	6.13	.	3.45
21MAR91:01:45	APG	6.87	0.00	0.31	197.30	73.30	2.08	.	6.21	.	3.55
21MAR91:02:00	APG	6.11	0.00	1.25	22.54	79.40	3.28	.	5.88	.	3.63
21MAR91:02:15	APG	5.74	0.00	0.43	72.60	87.40	3.56	.	6.20	.	3.96
21MAR91:02:30	APG	5.92	0.00	0.45	69.11	88.70	4.17	.	5.94	.	4.42
21MAR91:02:45	APG	6.32	0.00	1.65	46.06	86.70	4.46	.	5.75	.	4.34
21MAR91:03:00	APG	6.41	0.00	0.44	48.48	85.20	4.51	.	5.73	.	4.45
21MAR91:03:15	APG	6.34	0.00	0.43	63.16	85.00	4.72	.	5.84	.	4.68
21MAR91:03:30	APG	6.43	0.00	0.44	82.10	85.10	4.63	.	5.74	.	4.68
21MAR91:03:45	APG	6.48	0.00	0.45	74.00	85.10	4.49	.	5.75	.	4.64
21MAR91:04:00	APG	6.59	0.00	0.44	73.50	82.80	4.91	.	5.93	.	4.76
21MAR91:04:15	APG	6.81	0.00	1.06	73.00	79.10	5.12	.	6.24	.	5.04
21MAR91:04:30	APG	6.90	0.00	1.32	65.00	77.30	5.39	.	6.18	.	5.03
21MAR91:04:45	APG	7.01	0.00	0.62	71.20	76.60	5.30	.	6.08	.	4.98
21MAR91:05:00	APG	7.01	0.00	1.07	83.30	77.10	5.17	.	5.96	.	4.98
21MAR91:05:15	APG	7.02	0.00	1.47	68.32	78.90	5.42	.	6.19	.	5.16
21MAR91:05:30	APG	6.96	0.00	0.70	63.66	80.80	5.38	.	6.18	.	5.09
21MAR91:05:45	APG	6.81	0.00	0.44	62.18	81.70	5.41	.	6.13	.	5.30
21MAR91:06:00	APG	6.80	0.00	0.42	43.81	80.60	5.52	.	6.20	.	5.29
21MAR91:06:15	APG	6.82	0.17	0.42	65.12	79.70	5.41	.	6.16	.	5.32
21MAR91:06:30	APG	6.83	2.62	0.44	38.11	79.20	5.69	.	6.30	.	5.38
21MAR91:06:45	APG	6.81	8.49	0.09	61.42	78.90	5.91	.	6.32	.	5.55
21MAR91:07:00	APG	6.96	19.71	0.34	279.70	76.70	6.45	.	6.42	.	5.63
21MAR91:07:15	APG	7.24	26.16	0.34	43.38	76.90	6.51	.	6.56	.	6.03
21MAR91:07:30	APG	7.36	47.74	0.39	61.33	80.30	7.18	.	6.87	.	6.37
21MAR91:07:45	APG	7.62	100.80	0.61	76.50	81.10	8.07	.	7.66	.	6.66
21MAR91:08:00	APG	7.76	100.20	1.38	65.79	78.30	8.03	.	7.68	.	7.01
21MAR91:08:15	APG	.	.	.	.	.	8.48	.	8.16	.	7.28
21MAR91:08:30	APG	.	.	.	.	.	8.38	.	.	.	.
15JUL91:18:30	APG	28.68	317.40	3.34	102.90	37.74	.	.	.	.	.
15JUL91:18:45	APG	28.40	270.90	2.80	110.80	38.18	.	.	.	.	.
15JUL91:19:00	APG	28.13	225.00	2.62	112.50	38.01	.	.	.	.	.
15JUL91:19:15	APG	27.90	180.10	2.19	108.40	38.57	27.06	.	29.85	33.06	30.89
15JUL91:19:30	APG	27.47	136.00	2.16	110.90	39.20	25.52	.	27.62	31.43	29.28
15JUL91:19:45	APG	26.86	96.20	1.58	120.40	41.21	24.06	.	26.72	29.50	28.01
15JUL91:20:00	APG	26.09	55.37	1.39	120.00	44.60	22.11	.	25.58	27.14	26.59
15JUL91:20:15	APG	25.32	24.15	1.37	136.70	48.48	18.47	.	24.12	24.57	25.42
15JUL91:20:30	APG	24.65	8.25	0.61	116.10	52.25	17.58	.	23.04	22.79	24.82
15JUL91:20:45	APG	23.37	2.20	0.42	18.12	58.32	17.07	.	22.72	21.65	24.53
15JUL91:21:00	APG	22.36	0.00	0.44	26.27	63.50	16.77	.	22.53	20.86	24.23
15JUL91:21:15	APG	21.85	0.00	0.42	9.69	66.19	16.36	.	22.23	20.25	23.88
15JUL91:21:30	APG	21.72	0.00	0.37	45.69	69.05	16.05	.	21.74	19.66	23.56
15JUL91:21:45	APG	21.93	0.00	1.00	132.80	68.90	15.90	.	21.76	19.40	23.48
15JUL91:22:00	APG	21.67	0.00	0.47	82.60	70.10	15.98	.	21.70	19.17	23.24
15JUL91:22:15	APG	20.98	0.00	0.68	333.90	74.80	15.82	.	20.89	18.77	22.80
15JUL91:22:30	APG	20.98	0.00	0.28	319.70	76.10	15.64	.	20.44	18.32	22.39
15JUL91:22:45	APG	20.74	0.00	0.38	226.50	80.60	15.74	.	20.97	18.22	22.36

(Continued)

Table A3 (Continued)

DAY AND TIME OF COLLECTION	VISITED SITE	AIR TEMP. (C)	SOLAR RADIATION (W/M**2)	WIND MAGNITUD (M/S)	WIND DIRECTION (DEGREES)	RELATIVE HUMIDITY (PERCENT)	BCKGND GRASS (C)	BCKGND BUSH (C)	BCKGND TREE (C)	BCKGND SOIL (C)	BCKGND ROAD (C)
15JUL91:23:00	APG	20.39	0.00	0.36	13.77	84.60	15.69	.	20.16	17.90	21.98
15JUL91:23:15	APG	20.70	0.00	0.66	216.30	83.90	15.61	.	20.40	17.68	21.83
15JUL91:23:30	APG	20.47	0.00	0.60	342.70	82.70	15.57	.	20.16	17.37	21.67
15JUL91:23:45	APG	20.48	0.00	0.43	7.70	81.10	15.64	.	20.67	17.17	21.59
16JUL91:00:00	APG	20.19	0.00	0.45	50.23	83.80	15.18	.	20.59	17.17	21.41
16JUL91:00:15	APG	19.68	0.00	0.45	49.98	83.50	15.02	.	19.98	16.92	21.00
16JUL91:00:30	APG	19.36	0.00	0.41	56.40	83.90	14.37	.	19.50	16.80	20.78
16JUL91:00:45	APG	18.82	0.00	0.55	13.26	86.40	14.68	.	18.95	16.65	20.63
16JUL91:01:00	APG	18.45	0.00	0.50	13.35	90.00	15.09	.	19.00	16.47	20.50
16JUL91:01:15	APG	18.74	0.00	0.38	81.40	90.10	15.26	.	19.24	16.63	20.61
16JUL91:01:30	APG	19.00	0.00	0.41	24.49	89.70	15.34	.	19.31	16.60	20.44
16JUL91:01:45	APG	19.41	0.00	0.32	186.90	91.60	14.87	.	19.59	16.49	18.41
16JUL91:02:00	APG	19.51	0.00	0.26	8.19	91.50	15.31	.	18.95	16.42	17.34
16JUL91:02:15	APG	18.71	0.00	1.07	32.87	92.40	15.73	.	18.95	16.64	17.84
16JUL91:02:30	APG	17.94	0.00	0.43	30.52	94.00	16.08	.	19.21	16.49	17.46
16JUL91:02:45	APG	18.57	0.00	0.38	3.50	95.20	16.24	.	19.68	16.82	18.65
16JUL91:03:00	APG	18.97	0.00	0.45	26.40	95.10	15.65	.	19.95	17.01	19.22
16JUL91:03:15	APG	18.75	0.00	0.44	24.36	95.10	15.08	.	19.29	16.68	18.14
16JUL91:03:30	APG	18.55	0.00	0.50	22.50	95.30	14.81	.	18.85	16.27	17.08
16JUL91:03:45	APG	18.33	0.00	0.45	9.47	95.60	14.50	.	18.64	16.18	16.92
16JUL91:04:00	APG	18.21	0.00	0.44	64.33	95.70	14.05	.	18.49	16.11	17.24
16JUL91:04:15	APG	18.01	0.00	0.64	83.80	95.80	14.28	.	18.25	15.92	16.55
16JUL91:04:30	APG	17.08	0.00	0.90	64.47	95.90	14.02	.	17.79	15.62	17.08
16JUL91:04:45	APG	16.66	0.00	0.41	43.40	96.10	14.07	.	18.08	15.43	15.87
16JUL91:05:00	APG	16.71	0.00	0.68	354.80	96.20	14.36	.	17.55	15.27	16.21
16JUL91:05:15	APG	17.25	0.00	0.42	357.00	96.20	15.27	.	17.48	15.31	16.60
16JUL91:05:30	APG	17.75	0.00	0.44	16.35	96.10	15.16	.	17.43	15.36	16.34
16JUL91:05:45	APG	17.48	1.84	0.45	32.51	96.20	15.07	.	18.01	15.57	16.41
16JUL91:06:00	APG	17.86	8.13	0.45	32.47	96.10	15.20	.	18.21	15.84	16.56
16JUL91:06:15	APG	18.23	32.29	0.44	22.50	96.10	15.59	.	18.67	16.20	17.15
16JUL91:06:30	APG	18.65	72.00	0.44	23.15	95.90	16.35	.	18.32	16.50	17.65
16JUL91:06:45	APG	19.43	114.40	0.44	52.80	95.60	17.19	.	18.80	16.98	17.89
16JUL91:07:00	APG	20.65	163.90	0.43	13.16	95.00	18.28	.	19.09	17.42	18.35
16JUL91:07:15	APG	22.10	213.80	0.45	17.19	93.90	19.48	.	19.54	17.86	18.89
16JUL91:07:30	APG	23.39	265.10	0.44	27.67	92.00	20.82	.	20.18	18.47	19.52
16JUL91:07:45	APG	24.51	313.00	0.47	22.11	89.70	21.51	.	20.97	19.34	20.32
16JUL91:08:00	APG	24.75	365.70	1.19	23.25	88.60	22.10	.	21.78	20.40	20.99
16JUL91:08:15	APG	24.69	413.10	1.65	34.48	88.80	22.60	.	22.80	22.34	21.73
16JUL91:08:30	APG	24.94	463.30	1.63	35.77	88.00	23.41	.	22.85	21.76	21.73
16JUL91:08:45	APG	25.66	510.70	1.34	50.11	86.50	24.20	.	23.75	21.51	22.16
16JUL91:09:00	APG	26.10	560.00	1.62	54.90	84.80	25.51	.	24.15	22.45	23.21
16JUL91:09:15	APG	26.47	604.70	1.54	72.80	84.00	26.86	.	25.77	25.65	25.11
16JUL91:09:30	APG	27.19	655.20	0.96	76.60	80.40	27.78	.	26.57	32.01	24.32
16JUL91:09:45	APG	27.44	698.60	1.73	99.30	79.90	28.92	.	26.49	35.95	23.63
16JUL91:10:00	APG	27.68	735.00	1.37	94.70	79.10	29.45	.	26.17	37.77	23.55
16JUL91:10:15	APG	28.03	771.00	1.40	75.40	76.90	30.01	.	26.05	38.06	23.47
16JUL91:10:30	APG	29.17	806.00	0.54	72.60	73.10	31.33	.	26.40	40.86	24.01
16JUL91:10:45	APG	29.03	838.00	1.57	131.20	73.20	31.61	.	26.36	42.18	23.24
16JUL91:11:00	APG	28.55	865.00	2.13	138.10	74.20	31.95	.	26.48	43.26	23.22
16JUL91:11:15	APG	28.39	897.00	2.00	152.30	73.60	32.11	.	26.35	42.32	24.29
16JUL91:11:30	APG	28.75	923.00	1.99	133.90	72.10	32.60	.	26.62	43.18	30.04

(Continued)

Table A3 (Continued)

DAY AND TIME OF COLLECTION	VISITED SITE	AIR TEMP. (C)	SOLAR RADIATION (W/M**2)	WIND MAGNITUD (M/S)	WIND DIRECTION (DEGREES)	RELATIVE HUMIDITY (PERCENT)	BCKGND GRASS (C)	BCKGND BUSH (C)	BCKGND TREE (C)	BCKGND SOIL (C)	BCKGND ROAD (C)
16JUL91:11:45	APG	29.04	911.00	1.96	123.50	67.79	33.41	.	27.25	43.95	33.91
16JUL91:12:00	APG	29.55	962.00	1.70	130.30	56.65	33.72	.	27.49	47.79	36.15
16JUL91:12:15	APG	30 20	980.00	1.57	178.50	46.27	34.13	.	27.84	46.71	37.62
16JUL91:12:30	APG	30.54	988.00	1.78	180.00	39.36	34.24	.	27.55	48.10	38.11
16JUL91:12:45	APG	30.45	983.00	1.96	220.80	40.01	34.67	.	27.87	49.53	39.47
16JUL91:13:00	APG	30.17	965.00	2.64	220.50	41.17	34.74	.	28.49	48.44	40.66
16JUL91:13:15	APG	30.03	979.00	2.43	234.10	41.87	35.49	.	28.82	49.58	41.39
16JUL91:13:30	APG	30.35	974.00	2.29	237.50	40.96	35.27	.	28.47	50.99	41.83
16JUL91:13:45	APG	29.92	959.00	3.06	242.80	42.61	34.76	.	28.40	46.05	41.87
16JUL91:14:00	APG	30.18	950.00	2.53	234.50	42.21	35.09	.	28.88	45.96	42.56
16JUL91:14:15	APG	30.80	936.00	2.28	255.20	40.21	34.78	.	28.81	44.50	43.12
16JUL91:14:30	APG	30.70	914.00	2.78	242.30	41.36	35.58	.	29.75	50.98	43.84
16JUL91:14:45	APG	30.56	888.00	2.59	237.70	42.92	34.91	.	29.16	51.12	43.79
16JUL91:15:00	APG	30.83	865.00	1.67	199.20	42.97	34.83	.	29.39	51.29	43.47
16JUL91:15:15	APG	30.96	841.00	1.82	173.80	42.13	34.83	.	29.06	50.51	43.45
16JUL91:15:30	APG	30.97	809.00	1.43	181.30	42.25	34.78	.	29.21	50.13	42.87
16JUL91:15:45	APG	31.06	784.00	1.85	212.70	42.73	34.28	.	29.60	49.25	43.06
16JUL91:16:00	APG	30.50	746.00	1.87	228.20	43.87	34.05	.	29.89	49.30	42.98
16JUL91:16:15	APG	30.60	706.00	2.67	229.60	43.34	33.89	.	29.68	48.01	41.94
16JUL91:16:30	APG	30.40	671.40	2.58	230.20	43.16	34.04	.	29.97	47.89	41.81
16JUL91:16:45	APG	30.29	630.80	2.73	243.20	42.69	33.36	.	29.59	46.91	40.64
16JUL91:17:00	APG	30.44	591.90	2.28	217.40	42.46	33.09	.	29.94	45.84	40.38
16JUL91:17:15	APG	30.41	547.10	2.11	234.40	42.19	32.48	.	29.73	44.56	39.56
16JUL91:17:30	APG	30.22	499.70	2.16	226.30	43.75	32.06	.	29.96	43.83	38.90
16JUL91:17:45	APG	30.13	452.00	2.13	222.30	43.37	31.26	.	29.30	41.73	37.05
16JUL91:18:00	APG	30.09	401.40	2.15	211.20	44.38	30.64	.	29.57	40.42	36.25
16JUL91:18:15	APG	29.88	353.20	2.23	223.20	46.30	29.59	.	29.03	39.12	35.18
16JUL91:18:30	APG	29.62	303.50	2.35	225.50	48.79	28.78	.	29.28	36.84	33.98
16JUL91:18:45	APG	29.38	253.80	2.07	212.40	49.55	28.40	.	29.62	36.08	32.91
16JUL91:19:00	APG	29.09	203.30	2.48	202.20	49.59	27.44	.	29.13	34.74	31.91
16JUL91:19:15	APG	28.82	167.10	2.29	193.70	48.85	26.09	.	28.69	33.07	30.74
16JUL91:19:30	APG	28.57	121.80	1.90	202.10	50.22	24.84	.	28.12	31.58	29.94
16JUL91:19:45	APG	28.21	87.30	2.44	199.70	53.61	23.96	.	27.17	29.84	29.01
16JUL91:20:00	APG	27.87	49.27	2.25	201.30	54.32	23.35	.	26.26	27.36	27.96
16JUL91:20:15	APG	27.62	22.21	2.75	205.80	53.58	22.50	.	25.39	25.47	27.04
16JUL91:20:30	APG	27.46	8.37	2.84	205.60	52.32	22.22	.	24.87	24.06	26.50
16JUL91:20:45	APG	27.34	1.88	2.59	210.30	51.04	22.20	.	25.01	23.35	26.33
16JUL91:21:00	APG	27.24	0.00	2.37	198.30	50.42	21.50	.	24.49	22.56	25.98
16JUL91:21:15	APG	27.19	0.00	2.79	200.00	50.35	21.18	.	24.09	22.12	25.77
16JUL91:21:30	APG	27.00	0.00	2.50	194.20	53.17	21.33	.	23.93	21.85	25.49
16JUL91:21:45	APG	26.65	0.00	2.75	193.30	57.60	21.85	.	24.04	21.58	25.31
16JUL91:22:00	APG	26.48	0.00	2.85	198.40	58.21	22.45	.	24.41	21.81	25.20
16JUL91:22:15	APG	26.39	0.00	3.04	195.10	61.03	22.80	.	24.76	22.00	25.23
16JUL91:22:30	APG	26.19	0.00	3.19	192.00	64.29	22.60	.	24.67	21.89	24.93
16JUL91:22:45	APG	26.02	0.00	3.03	196.20	66.85	22.63	.	24.69	21.89	24.86
16JUL91:23:00	APG	25.95	0.00	2.95	183.40	68.20	23.02	.	24.63	21.87	24.72
16JUL91:23:15	APG	25.90	0.00	3.20	192.40	69.15	23.15	.	24.86	22.13	24.65
16JUL91:23:30	APG	25.82	0.00	3.41	200.00	69.99	22.89	.	24.58	21.88	24.35
16JUL91:23:45	APG	25.82	0.00	3.83	194.10	70.10	22.76	.	24.56	21.86	24.34
17JUL91:00:00	APG	25.74	0.00	3.72	197.60	71.20	22.51	.	24.40	21.71	24.13
17JUL91:00:15	APG	25.84	0.00	4.24	212.30	69.29	22.80	.	24.85	21.99	24.11

(Continued)

Table A3 (Concluded)

DAY AND TIME OF COLLECTION	VISITED SITE	AIR TEMP. (C)	SOLAR RADIATION (W/M**2)	WIND MAGNITUD (M/S)	WIND DIRECTION (DEGREES)	RELATIVE HUMIDITY (PERCENT)	BCKGND GRASS (C)	BCKGND BUSH (C)	BCKGND TREE (C)	BCKGND SOIL (C)	BCKGND ROAD (C)
17JUL91:00:30	APG	25.85	0.00	4.30	217.30	68.33	23.15	.	25.18	22.30	24.08
17JUL91:00:45	APG	25.79	0.00	4.24	217.40	69.43	23.27	.	24.93	22.20	23.92
17JUL91:01:00	APG	25.70	0.00	4.49	219.00	70.20	23.15	.	25.09	22.21	23.83
17JUL91:01:15	APG	25.59	0.00	4.42	230.20	70.30	22.96	.	24.83	22.12	23.61
17JUL91:01:30	APG	25.44	0.00	4.49	237.00	70.60	22.74	.	24.71	22.02	23.50
17JUL91:01:45	APG	25.29	0.00	4.32	236.60	70.70	22.70	.	24.50	21.93	23.32
17JUL91:02:00	APG	25.20	0.00	4.36	248.70	71.00	22.17	.	24.31	21.69	23.31
17JUL91:02:15	APG	25.03	0.00	3.65	245.00	71.70	21.99	.	24.12	21.55	23.11
17JUL91:02:30	APG	24.89	0.00	3.75	254.00	72.00	22.04	.	24.28	21.45	23.11
17JUL91:02:45	APG	24.94	0.00	3.72	243.20	70.80	21.46	.	24.10	21.23	22.91
17JUL91:03:00	APG	24.84	0.00	3.63	248.10	70.20	21.57	.	23.97	21.03	22.72
17JUL91:03:15	APG	24.75	0.00	3.93	242.20	69.29	21.68	.	23.96	20.94	22.70
17JUL91:03:30	APG	24.53	0.00	3.53	247.50	71.00	21.26	.	23.79	20.81	22.59
17JUL91:03:45	APG	24.25	0.00	3.63	243.40	72.20	21.01	.	23.16	20.28	22.33
17JUL91:04:00	APG	24.15	0.00	4.23	245.50	72.80	21.16	.	23.23	20.31	22.36
17JUL91:04:15	APG	24.00	0.00	3.89	226.50	73.40	21.38	.	23.35	20.42	22.36
17JUL91:04:30	APG	23.85	0.00	3.50	234.50	74.80	21.24	.	23.27	20.44	22.17
17JUL91:04:45	APG	23.72	0.00	3.54	235.00	75.80	20.89	.	22.98	20.18	22.09
17JUL91:05:00	APG	23.59	0.00	3.39	242.20	77.90	20.49	.	22.65	20.00	21.92
17JUL91:05:15	APG	23.38	0.00	2.49	255.10	80.80	20.28	.	22.72	20.01	21.93
17JUL91:05:30	APG	23.17	0.00	2.84	249.00	82.50	20.09	.	22.41	19.67	21.75
17JUL91:05:45	APG	23.00	0.17	3.19	252.90	83.60	19.98	.	22.33	19.43	21.67
17JUL91:06:00	APG	22.99	3.12	3.23	248.80	83.50	20.21	.	22.45	19.65	21.62
17JUL91:06:15	APG	22.90	15.26	2.87	246.00	84.20	19.77	.	22.39	19.63	21.53
17JUL91:06:30	APG	23.02	52.66	2.63	238.50	84.60	19.84	.	22.29	19.77	21.58
17JUL91:06:45	APG	23.33	94.50	2.37	255.50	85.10	20.73	.	22.51	20.18	21.69
17JUL91:07:00	APG	23.57	142.70	3.01	259.70	85.00	21.48	.	22.44	20.36	21.79
17JUL91:07:15	APG	23.95	193.90	2.86	259.80	84.70	21.96	.	22.68	20.83	21.91
17JUL91:07:30	APG	24.48	234.00	2.74	260.20	84.20	22.39	.	22.91	21.26	22.07
17JUL91:07:45	APG	24.60	291.10	3.36	261.00	83.40	22.86	.	23.09	21.74	22.15
17JUL91:08:00	APG	24.78	346.20	3.38	253.40	82.60	22.40	.	23.47	22.32	22.31
17JUL91:08:15	APG	25.13	391.70	3.13	245.50	81.50	.	.	.	.	.
17JUL91:08:30	APG	25.52	443.10	3.05	245.70	79.10	.	.	.	.	.

Table A4
Scene Contents Reports for Aberdeen Proving Ground; Angular Scale of Photo Interpreted Equals 0.54 deg/in.

Scene #1 - March TOTAL AREA: 22.2089 SQ IN.

RECORD NUMBER	AREA OR OBJECT	CHARACTERISTIC	COLOR	POLYGON AREA (SQ IN.)	PERCENTAGE OF AREA	POLYGON PERIMETER (INCHES)
2	Sky	None	Blue	0.7453	3.36	9.6698
3	Trees	Leaves Off	Brown	1.1395	5.13	10.2925
4	Man-Made	Unknown	White	0.0089	0.04	0.4454
5	Water	Open Water	Blue	1.7381	7.83	11.2427
6	Man-Made	Telephone Pole	Gray	0.0156	0.07	0.7421
7	Man-Made	Telephone Pole	Brown	0.0073	0.03	0.5045
8	Grass	Tall Field	Tan	4.2324	19.06	15.3745
9	Road	Gravel	Gray	0.1732	0.78	4.2617
10	Man-Made	Target	Gray	0.0108	0.05	0.4471
11	Grass	Short Field	Tan	1.1020	4.96	11.3252
12	Road	Gravel	Gray	0.2739	1.23	7.0293
13	Road	Gravel	Gray	0.3459	1.56	9.4501
14	Grass	Short Field	Tan	1.7722	7.98	10.3205
15	Road	Dirt	Sandy	0.4752	2.14	10.3009
16	Grass	Short Field	Tan	3.7479	16.88	10.9097
17	Road	Gravel	Gray	0.4602	2.07	9.5003
18	Grass	Short Field	Tan	5.0803	22.87	13.3870
19	Man-Made	Target	White	0.8657	3.90	3.7137
20	Grass	Short Field	Tan	0.0086	0.04	0.6275
21	Man-Made	Target	White	0.0061	0.03	0.6040

NUMBER OF POLYGONS: 20
DIFFERENT TYPES OF OBJECTS: 6

PERCENTAGE OF AREA FOR TYPE Man-Made IS 4.12%
PERCENTAGE OF AREA FOR TYPE Grass IS 71.79%
PERCENTAGE OF AREA FOR TYPE Trees IS 5.13%
PERCENTAGE OF AREA FOR TYPE Road IS 7.78%
PERCENTAGE OF AREA FOR TYPE Water IS 7.83%
PERCENTAGE OF AREA FOR TYPE Sky IS 3.36%
PERCENTAGE OF AREA FOR TYPE Soil IS 0.00%
PERCENTAGE OF AREA FOR TYPE Mountain IS 0.00%

TOTAL EDGE LENGTH: 60.6477 IN.

LINEAR EDGES BETWEEN TYPES (INCHES)

	Man-Made	Grass	Trees	Road	Water	Sky	Soil	Mountain
Man-Made	0.0000	3.6644	0.4454	0.0000	1.2512	0.0000	0.0000	0.0000
Grass	3.6644	1.8336	0.0000	39.5648	4.5204	0.0000	0.0000	0.0000
Trees	0.4454	0.0000	0.0000	0.0000	4.6430	4.7249	0.0000	0.0000
Road	0.0000	39.5648	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water	1.2512	4.5204	4.6430	0.0000	0.0000	0.0000	0.0000	0.0000
Sky	0.0000	0.0000	4.7249	0.0000	0.0000	0.0000	0.0000	0.0000
Soil	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mountain	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

NUMBER OF VEHICLES: 0
GREEN VEGETATION PRESENT: NO

(Continued)

Table A4 (Continued)

Scene #2 - March TOTAL AREA: 22.2710 SQ IN.

RECORD NUMBER	AREA OR OBJECT	CHARACTERISTIC	COLOR	POLYGON AREA (SQ IN.)	PERCENTAGE OF AREA	POLYGON PERIMETER (INCHES)
2	Trees	Leaves Off	Brown	6.3227	28.39	12.0363
3	Grass	Short Field	Tan	2.2427	10.07	17.1122
4	Man-Made	Concrete	White	0.0303	0.14	0.7027
5	Road	Gravel	Gray	0.6154	2.76	14.4036
6	Grass	Tall Field	Tan	0.2984	1.34	4.5007
7	Grass	Short Field	Tan	0.4199	1.89	7.0135
8	Man-Made	Concrete	White	0.0041	0.02	0.3016
9	Water	Marshy Area	Tan	1.4820	6.65	11.8800
10	Water	Open Water	Blue	0.0352	0.16	1.5073
11	Man-Made	Metal Pole	White	0.0028	0.01	0.2232
12	Water	Open Water	Blue	0.0863	0.39	2.4416
13	Grass	Short Field	Tan	10.7057	48.07	15.0740
14	Man-Made	Metal Pole	White	0.0130	0.06	0.5596
15	Man-Made	Metal Pole	White	0.0126	0.06	0.5196

NUMBER OF POLYGONS: 14
DIFFERENT TYPES OF OBJECTS: 5

PERCENTAGE OF AREA FOR TYPE Man-Made IS 0.28%
PERCENTAGE OF AREA FOR TYPE Grass IS 61.37%
PERCENTAGE OF AREA FOR TYPE Trees IS 28.39%
PERCENTAGE OF AREA FOR TYPE Road IS 2.76%
PERCENTAGE OF AREA FOR TYPE Water IS 7.20%
PERCENTAGE OF AREA FOR TYPE Sky IS 0.00%
PERCENTAGE OF AREA FOR TYPE Soil IS 0.00%
PERCENTAGE OF AREA FOR TYPE Mountain IS 0.00%

TOTAL EDGE LENGTH: 34.6986 IN.

LINEAR EDGES BETWEEN TYPES (INCHES)

	Man-Made	Grass	Trees	Road	Water	Sky	Soil	Mountain
Man-Made	0.0000	1.8849	0.1986	0.0000	0.2232	0.0000	0.0000	0.0000
Grass	1.8849	4.2740	4.4634	11.4449	6.5532	0.0000	0.0000	0.0000
Trees	0.1986	4.4634	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Road	0.0000	11.4449	0.0000	0.0000	2.8078	0.0000	0.0000	0.0000
Water	0.2232	6.5532	0.0000	2.8078	2.8485	0.0000	0.0000	0.0000
Sky	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Soil	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mountain	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

NUMBER OF VEHICLES: 0

GREEN VEGETATION PRESENT: NO

(Continued)

Table A4 (Continued)

Scene #3 - March TOTAL AREA: 22.1166 SQ IN.

RECORD NUMBER	AREA OR OBJECT	CHARACTERISTIC	COLOR	POLYGON AREA (SQ IN.)	PERCENTAGE OF AREA	POLYGON PERIMETER (INCHES)
2	Sky	None	Blue	0.0159	0.07	1.0055
3	Trees	Leaves Off	Brown	5.8716	26.55	12.5368
4	Sky	None	Blue	0.0060	0.03	0.3767
5	Grass	Short Field	Tan	2.4841	11.23	10.5491
6	Man-Made	Concrete	White	0.0176	0.08	0.5318
7	Man-Made	Telephone Pole	Brown	0.0907	0.41	2.9892
8	Road	Gravel	Gray	0.2572	1.16	9.3064
9	Grass	Short Field	Tan	1.4646	6.62	11.5267
10	Man-Made	Concrete	White	0.0138	0.06	0.6806
11	Water	Marshy Area	Tan	1.1116	5.03	7.1510
12	Water	Open Water	Blue	0.1256	0.57	2.8988
13	Water	Open Water	Blue	0.0724	0.33	1.8103
14	Grass	Short Field	Tan	10.5856	47.86	14.3615

NUMBER OF POLYGONS: 13
DIFFERENT TYPES OF OBJECTS: 6

PERCENTAGE OF AREA FOR TYPE Man-Made IS 0.55%
PERCENTAGE OF AREA FOR TYPE Grass IS 65.72%
PERCENTAGE OF AREA FOR TYPE Trees IS 26.55%
PERCENTAGE OF AREA FOR TYPE Road IS 1.16%
PERCENTAGE OF AREA FOR TYPE Water IS 5.92%
PERCENTAGE OF AREA FOR TYPE Sky IS 0.1%
PERCENTAGE OF AREA FOR TYPE Soil IS 0.00%
PERCENTAGE OF AREA FOR TYPE Mountain IS 0.00%

TOTAL EDGE LENGTH: 28.4557 IN.

LINEAR EDGES BETWEEN TYPES (INCHES)

	Man-Made	Grass	Trees	Road	Water	Sky	Soil	Mountain
Man-Made	0.0000	2.0996	0.7945	0.0700	0.0658	0.0000	0.0000	0.0000
Grass	2.0996	0.0000	4.5518	9.1823	10.2407	0.0000	0.0000	0.0000
Trees	0.7945	4.5518	0.0000	0.0000	0.0000	0.7071	0.0000	0.0000
Road	0.0700	9.1823	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water	0.0658	10.2407	0.0000	0.0000	0.7440	0.0000	0.0000	0.0000
Sky	0.0000	0.0000	0.7071	0.0000	0.0000	0.0000	0.0000	0.0000
Soil	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mountain	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

NUMBER OF VEHICLES: 0

GREEN VEGETATION PRESENT: NO

(Continued)

Table A4 (Continued)

Scene #4 - March TOTAL AREA: 22.2362 SQ IN.

RECORD NUMBER	AREA OR OBJECT	CHARACTERISTIC	COLOR	POLYGON AREA (SQ IN.)	PERCENTAGE OF AREA	POLYGON PERIMETER (INCHES)
2	Sky	None	Blue	0.0483	0.22	1.6145
3	Trees	Leaves Off	Brown	4.4775	20.14	13.8728
4	Sky	None	Blue	0.0045	0.02	0.3117
5	Man-Made	Unknown	Brown	0.0966	0.43	4.0060
6	Trees	Leaves Off	Brown	0.0546	0.25	1.2917
7	Trees	Leaves Off	Brown	0.0498	0.22	0.9726
8	Man-Made	Unknown	Brown	0.0278	0.12	1.4932
9	Trees	Leaves Off	Brown	0.0482	0.22	0.9520
10	Grass	Short Field	Tan	2.6869	12.08	16.9989
11	Man-Made	Target	White	0.0597	0.27	1.4013
12	Grass	Short Field	Tan	0.0551	0.25	1.0479
13	Grass	Short Field	Tan	0.0841	0.38	1.7291
14	Grass	Short Field	Tan	0.0107	0.05	0.4969
15	Grass	Short Field	Tan	0.0163	0.07	0.6363
16	Grass	Short Field	Tan	0.0050	0.02	0.2877
17	Grass	Short Field	Tan	0.0140	0.06	0.4858
18	Trees	Leaves Off	Brown	0.0063	0.03	0.4162
19	Trees	Leaves Off	Brown	0.0079	0.04	0.3866
20	Trees	Leaves Off	Brown	0.0235	0.11	0.8537
21	Man-Made	Unknown	Brown	0.0617	0.28	2.4859
22	Grass	Short Field	Tan	0.0044	0.02	0.4894
23	Soil	Dirt Mound	Sandy	0.1570	0.71	2.0902
24	Trees	Leaves On	Gray	0.5004	2.25	14.2385
25	Grass	Short Field	Tan	1.5231	6.85	13.4874
26	Water	Marshy Area	Tan	1.1939	5.37	12.4176
27	Water	Open Water	Blue	0.0157	0.07	0.6577
28	Water	Open Water	Blue	0.3693	1.66	6.9141
29	Grass	Short Field	Tan	10.4264	46.89	17.4079
30	Water	Marshy Area	Tan	0.2078	0.93	3.3711

NUMBER OF POLYGONS: 29
DIFFERENT TYPES OF OBJECTS: 6

PERCENTAGE OF AREA FOR TYPE Man-Made IS 1.10%
PERCENTAGE OF AREA FOR TYPE Grass IS 66.67%
PERCENTAGE OF AREA FOR TYPE Trees IS 23.24%
PERCENTAGE OF AREA FOR TYPE Road IS 0.00%
PERCENTAGE OF AREA FOR TYPE Water IS 8.04%
PERCENTAGE OF AREA FOR TYPE Sky IS 0.24%
PERCENTAGE OF AREA FOR TYPE Soil IS 0.71%
PERCENTAGE OF AREA FOR TYPE Mountain IS 0.00%

TOTAL EDGE LENGTH: 52.0261 IN.

LINEAR EDGES BETWEEN TYPES (INCHES)

	Man-Made	Grass	Trees	Road	Water	Sky	Soil	Mountain
Man-Made	0.0262	7.1028	2.2312	0.0000	0.0000	0.0000	0.0000	0.0000
Grass	7.1028	0.0000	20.4781	0.0000	12.9350	0.0000	1.6164	0.0000
Trees	2.2312	20.4781	1.7350	0.0000	0.0000	0.9761	0.1713	0.0000
Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water	0.0000	12.9350	0.0000	0.0000	4.7540	0.0000	0.0000	0.0000
Sky	0.0000	0.0000	0.9761	0.0000	0.0000	0.0000	0.0000	0.0000
Soil	0.0000	1.6164	0.1713	0.0000	0.0000	0.0000	0.0000	0.0000
Mountain	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

NUMBER OF VEHICLES: 0

GREEN VEGETATION PRESENT: NO

(Continued)

Table A4 (Continued)

Scene #5 - March TOTAL AREA: 22.2679 SQ IN.

RECORD NUMBER	AREA OR OBJECT	CHARACTERISTIC	COLOR	POLYGON AREA (SQ IN.)	PERCENTAGE OF AREA	POLYGON PERIMETER (INCHES)
2	Trees	Leaves Off	Brown	2.2342	10.03	10.8643
3	Grass	Short Field	Tan	3.4206	15.36	20.1902
4	Man-Made	Metal Pole	Brown	0.0270	0.12	1.7367
5	Man-Made	Metal Pole	Brown	0.0307	0.14	1.6952
6	Grass	Short Field	Tan	0.4036	1.81	4.1576
7	Grass	Short Field	Tan	0.1085	0.49	1.8785
8	Man-Made	Metal Pole	Brown	0.0170	0.08	0.9015
9	Man-Made	Unknown	Brown	0.0495	0.22	1.2256
10	Soil	Dirt Mound	Sandy	0.0420	0.19	1.5148
11	Soil	Dirt Mound	Sandy	0.0301	0.14	0.9985
12	Man-Made	Unknown	Brown	0.0501	0.23	1.5699
13	Grass	Short Field	Tan	0.0313	0.14	1.2368
14	Man-Made	Unknown	Brown	0.0149	0.07	0.6125
15	Man-Made	Target	White	0.0293	0.13	0.6737
16	Man-Made	Target	White	0.0056	0.03	0.4334
17	Grass	Short Field	Tan	0.1749	0.79	1.8312
18	Man-Made	Building	Gray	0.0564	0.25	0.9629
19	Man-Made	Unknown	Brown	0.0284	0.13	0.8222
20	Soil	Dirt Mound	Sandy	0.4539	2.04	5.4244
21	Water	Marshy Area	Tan	3.7118	16.67	10.8286
22	Grass	Short Field	Tan	10.2123	45.86	26.7171
23	Water	Marshy Area	Tan	0.2829	1.27	4.6083
24	Water	Marshy Area	Tan	0.8115	3.64	9.8744
25	Water	Open Water	Blue	0.0413	0.19	1.5256

NUMBER OF POLYGONS: 24
DIFFERENT TYPES OF OBJECTS: 5

PERCENTAGE OF AREA FOR TYPE Man-Made IS 1.39%
PERCENTAGE OF AREA FOR TYPE Grass IS 64.45%
PERCENTAGE OF AREA FOR TYPE Trees IS 10.03%
PERCENTAGE OF AREA FOR TYPE Road IS 0.00%
PERCENTAGE OF AREA FOR TYPE Water IS 21.77%
PERCENTAGE OF AREA FOR TYPE Sky IS 0.00%
PERCENTAGE OF AREA FOR TYPE Soil IS 2.36%
PERCENTAGE OF AREA FOR TYPE Mountain IS 0.00%

TOTAL EDGE LENGTH. 46.7032 IN.

LINEAR EDGES BETWEEN TYPES (INCHES)

	Man-Made	Grass	Trees	Road	Water	Sky	Soil	Mountain
Man-Made	0.6390	8.2369	0.3597	0.0000	0.0000	0.0000	0.7590	0.0000
Grass	8.2369	1.1303	5.0722	0.0000	22.1368	0.0000	6.8437	0.0000
Trees	0.3597	5.0722	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water	0.0000	22.1368	0.0000	0.0000	1.5256	0.0000	0.0000	0.0000
Sky	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Soil	0.7590	6.8437	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mountain	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

NUMBER OF VEHICLES: 0

GREEN VEGETATION PRESENT: NO

(Continued)

Table A4 (Continued)

Scene #6 - March TOTAL AREA: 22.1170 SQ IN.

RECORD NUMBER	AREA OR OBJECT	CHARACTERISTIC	COLOR	POLYGON AREA (SQ IN.)	PERCENTAGE OF AREA	POLYGON PERIMETER (INCHES)
2	Trees	Leaves Off	Brown	2.8442	12.86	11.4239
3	Sky	None	Blue	0.0116	0.05	0.6160
4	Sky	None	Blue	0.0225	0.10	1.1160
5	Sky	None	Blue	0.0043	0.02	0.4216
6	Sky	None	Blue	0.0026	0.01	0.2351
7	Sky	None	Blue	0.0041	0.02	0.2873
8	Sky	None	Blue	0.0161	0.07	0.7495
9	Grass	Short Field	Tan	3.4519	15.61	16.2432
10	Man-Made	Vehicle	Green	0.0187	0.08	0.6402
11	Man-Made	Vehicle	Green	0.0396	0.18	1.1919
12	Man-Made	Metal Pole	Brown	0.0965	0.44	3.6679
13	Man-Made	Target	White	0.0270	0.12	0.6240
14	Road	Dirt	Sandy	0.0145	0.07	0.9253
15	Road	Dirt	Sandy	0.0617	0.28	2.7722
16	Road	Dirt	Sandy	0.0090	0.04	0.4627
17	Soil	Barren	Sandy	0.2544	1.15	4.2811
18	Grass	Short Field	Tan	0.3430	1.55	4.2831
19	Grass	Short Field	Tan	0.3013	1.36	4.5055
20	Road	Gravel	Gray	0.2305	1.04	5.7427
21	Road	Dirt	Sandy	0.1399	0.63	4.9559
22	Grass	Short Field	Tan	1.6577	7.50	9.7182
23	Water	Marshy Area	Tan	3.3790	15.28	10.8954
24	Grass	Short Field	Tan	9.0298	40.83	16.1138
25	Water	Marshy Area	Brown	0.1572	0.71	3.0598

NUMBER OF POLYGONS: 24
DIFFERENT TYPES OF OBJECTS: 7

PERCENTAGE OF AREA FOR TYPE Man-Made IS 0.82%
PERCENTAGE OF AREA FOR TYPE Grass IS 66.84%
PERCENTAGE OF AREA FOR TYPE Trees IS 12.86%
PERCENTAGE OF AREA FOR TYPE Road IS 2.06%
PERCENTAGE OF AREA FOR TYPE Water IS 15.99%
PERCENTAGE OF AREA FOR TYPE Sky IS 0.28%
PERCENTAGE OF AREA FOR TYPE Soil IS 1.15%
PERCENTAGE OF AREA FOR TYPE Mountain IS 0.00%

TOTAL EDGE LENGTH: 43.0585 IN.

LINEAR EDGES BETWEEN TYPES (INCHES)

	Man-Made	Grass	Trees	Road	Water	Sky	Soil	Mountain
Man-Made	0.0000	5.5047	0.0000	0.6193	0.0000	0.0000	0.0000	0.0000
Grass	5.5047	0.0000	5.3227	12.8842	12.2537	0.0000	3.9668	0.0000
Trees	0.0000	5.3227	0.0000	0.0000	0.0000	1.8416	0.0000	0.0000
Road	0.6193	12.8842	0.0000	0.5064	0.0000	0.0000	0.1591	0.0000
Water	0.0000	12.2537	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Sky	0.0000	0.0000	1.8416	0.0000	0.0000	0.0000	0.0000	0.0000
Soil	0.0000	3.9668	0.0000	0.1591	0.0000	0.0000	0.0000	0.0000
Mountain	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

NUMBER OF VEHICLES: 2
GREEN VEGETATION PRESENT: NO

(Continued)

Table A4 (Continued)

Scene #7 - March TOTAL AREA: 22.0686 SQ IN.

RECORD NUMBER	AREA OR OBJECT	CHARACTERISTIC	COLOR	POLYGON AREA (SQ IN.)	PERCENTAGE OF AREA	POLYGON PERIMETER (INCHES)
2	Trees	Leaves Off	Brown	0.9877	4.48	5.5451
3	Sky	None	Blue	0.0069	0.03	0.4500
4	Sky	None	Blue	0.0565	0.26	2.3375
5	Man-Made	Metal Pole	Silver	0.0914	0.41	3.5730
6	Sky	None	Blue	0.0390	0.18	1.6468
7	Trees	Leaves Off	Brown	1.1162	5.06	6.3700
8	Sky	None	Blue	0.0065	0.03	0.3727
9	Man-Made	Metal Pole	Gray	0.0228	0.10	1.1091
10	Grass	Short Field	Tan	0.1755	0.80	4.5012
11	Grass	Short Field	Tan	1.9958	9.04	11.8941
12	Grass	Short Field	Tan	2.6082	11.82	18.8639
13	Water	Open Water	Blue	0.3224	1.46	4.5874
14	Water	Open Water	Blue	0.0376	0.17	1.2605
15	Water	Open Water	Blue	0.0173	0.08	0.5887
16	Man-Made	Metal Pole	Gray	0.0131	0.06	0.8832
17	Man-Made	Unknown	Brown	0.0287	0.13	1.0321
18	Grass	Tall Field	Tan	0.1139	0.52	2.3833
19	Man-Made	Metal Pole	Brown	0.0054	0.02	0.5155
20	Soil	Barren	Sandy	0.1502	0.68	3.1246
21	Grass	Tall Field	Tan	0.9424	4.27	8.1364
22	Man-Made	Metal Pole	Brown	0.0065	0.03	0.4056
23	Road	Dirt	Sandy	0.1409	0.64	5.0035
24	Grass	Short Field	Tan	0.3806	1.72	4.8449
25	Water	Marshy Area	Tan	0.0020	0.01	0.3323
26	Road	Dirt	Sandy	0.0390	0.18	1.7753
27	Road	Dirt	Sandy	0.1298	0.59	3.9617
28	Water	Marshy Area	Tan	3.3253	15.07	10.6746
29	Grass	Short Field	Tan	8.1758	37.05	12.7917
30	Water	Marshy Area	Brown	0.9674	4.38	9.8933
31	Grass	Short Field	Tan	0.1012	0.46	3.7595
32	Grass	Short Field	Tan	0.0624	0.28	2.3778

NUMBER OF POLYGONS: 31
DIFFERENT TYPES OF OBJECTS: 7

PERCENTAGE OF AREA FOR TYPE Man-Made IS 0.76%
PERCENTAGE OF AREA FOR TYPE Grass IS 65.96%
PERCENTAGE OF AREA FOR TYPE Trees IS 9.53%
PERCENTAGE OF AREA FOR TYPE Road IS 1.40%
PERCENTAGE OF AREA FOR TYPE Water IS 21.17%
PERCENTAGE OF AREA FOR TYPE Sky IS 0.49%
PERCENTAGE OF AREA FOR TYPE Soil IS 0.68%
PERCENTAGE OF AREA FOR TYPE Mountain IS 0.00%

TOTAL EDGE LENGTH: 58.1012 IN.

LINEAR EDGES BETWEEN TYPES (INCHES)

	Man-Made	Grass	Trees	Road	Water	Sky	Soil	Mountain
Man-Made	0.0000	5.9881	1.2013	0.0000	0.1971	0.0866	0.0000	0.0000
Grass	5.9881	9.4148	4.9172	6.7742	20.9737	0.0000	2.9069	0.0000
Trees	1.2013	4.9172	0.0000	0.0000	0.0000	2.4492	0.0000	0.0000
Road	0.0000	6.7742	0.0000	0.6845	2.5075	0.0000	0.0000	0.0000
Water	0.1971	20.9737	0.0000	2.5075	0.0000	0.0000	0.0000	0.0000
Sky	0.0866	0.0000	2.4492	0.0000	0.0000	0.0000	0.0000	0.0000
Soil	0.0000	2.9069	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mountain	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

NUMBER OF VEHICLES: 0

GREEN VEGETATION PRESENT: NO

(Continued)

Table A4 (Continued)

Scene #8 - March TOTAL AREA: 22.3294 SQ IN.

RECORD NUMBER	AREA OR OBJECT	CHARACTERISTIC	COLOR	POLYGON AREA (SQ IN.)	PERCENTAGE OF AREA	POLYGON PERIMETER (INCHES)
2	Sky	None	Blue	0.4428	1.98	9.7395
3	Trees	Leaves Off	Brown	1.9053	8.53	10.3530
4	Grass	Short Field	Tan	0.4389	1.97	9.5110
5	Water	Open Water	Blue	0.7960	3.56	10.3839
6	Man-Made	Unknown	Brown	0.0101	0.05	0.5867
7	Man-Made	Metal Pole	Brown	0.0615	0.28	2.5517
8	Grass	Short Field	Tan	2.8077	12.57	14.1163
9	Grass	Short Field	Tan	0.0965	0.43	1.2178
10	Soil	Dirt Mound	Sandy	0.1672	0.75	3.4661
11	Grass	Tall Field	Tan	2.7019	12.10	10.5658
12	Road	Dirt	Sandy	0.3378	1.51	9.4711
13	Grass	Tall Field	Tan	0.3400	1.52	9.4434
14	Water	Marshy Area	Tan	2.8083	12.58	10.5727
15	Grass	Short Field	Tan	9.4153	42.17	13.4096

NUMBER OF POLYGONS: 14
DIFFERENT TYPES OF OBJECTS: 7

PERCENTAGE OF AREA FOR TYPE Man-Made IS 0.32%
PERCENTAGE OF AREA FOR TYPE Grass IS 70.76%
PERCENTAGE OF AREA FOR TYPE Trees IS 8.53%
PERCENTAGE OF AREA FOR TYPE Road IS 1.51%
PERCENTAGE OF AREA FOR TYPE Water IS 16.14%
PERCENTAGE OF AREA FOR TYPE Sky IS 1.98%
PERCENTAGE OF AREA FOR TYPE Soil IS 0.75%
PERCENTAGE OF AREA FOR TYPE Mountain IS 0.00%

TOTAL EDGE LENGTH: 48.2424 IN.

LINEAR EDGES BETWEEN TYPES (INCHES)

	Man-Made	Grass	Trees	Road	Water	Sky	Soil	Mountain
Man-Made	0.0000	1.8249	0.0000	0.0000	0.8770	0.0000	0.4364	0.0000
Grass	1.8249	4.6852	4.6571	9.3358	18.5145	0.0000	3.0297	0.0000
Trees	0.0000	4.6571	0.0000	0.0000	0.0000	4.8818	0.0000	0.0000
Road	0.0000	9.3358	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water	0.8770	18.5145	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Sky	0.0000	0.0000	4.8818	0.0000	0.0000	0.0000	0.0000	0.0000
Soil	0.4364	3.0297	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mountain	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

NUMBER OF VEHICLES: 0

GREEN VEGETATION PRESENT: NO

(Continued)

Table A4 (Continued)

Scene #9 - March TOTAL AREA: 22.0847 SQ IN.

RECORD NUMBER	AREA OR OBJECT	CHARACTERISTIC	COLOR	POLYGON AREA (SQ IN.)	PERCENTAGE OF AREA	POLYGON PERIMETER (INCHES)
2	Sky	None	Blue	0.4583	2.08	9.5668
3	Trees	Leaves Off	Brown	2.0715	9.38	10.2724
4	Grass	Short Field	Tan	0.3563	1.61	9.6289
5	Man-Made	Metal Pole	Brown	0.0339	0.15	1.6594
6	Water	Open Water	Blue	0.1507	0.68	2.6692
7	Water	Open Water	Blue	0.0294	0.13	0.7137
8	Water	Open Water	Blue	0.4496	2.04	6.5168
9	Grass	Short Field	Tan	2.2827	10.34	12.3178
10	Grass	Short Field	Tan	0.0158	0.07	0.5937
11	Soil	Dirt Mound	Sandy	0.0674	0.31	2.3790
12	Grass	Bushy Area	Brown	0.2272	1.03	3.3901
13	Grass	Tall Field	Tan	2.5153	11.39	10.8327
14	Grass	Short Field	Tan	0.0445	0.20	1.4892
15	Grass	Short Field	Tan	0.8111	3.67	7.6368
16	Road	Dirt	Sandy	0.2230	1.01	9.3655
17	Grass	Short Field	Tan	0.5606	2.54	7.1212
18	Water	Marshy Area	Tan	2.2619	10.24	10.5096
19	Grass	Short Field	Tan	9.5256	43.13	13.3826

NUMBER OF POLYGONS: 18
DIFFERENT TYPES OF OBJECTS: 7

PERCENTAGE OF AREA FOR TYPE Man-Made IS 0.15%
PERCENTAGE OF AREA FOR TYPE Grass IS 73.98%
PERCENTAGE OF AREA FOR TYPE Trees IS 9.38%
PERCENTAGE OF AREA FOR TYPE Road IS 1.01%
PERCENTAGE OF AREA FOR TYPE Water IS 13.09%
PERCENTAGE OF AREA FOR TYPE Sky IS 2.08%
PERCENTAGE OF AREA FOR TYPE Soil IS 0.31%
PERCENTAGE OF AREA FOR TYPE Mountain IS 0.00%

TOTAL EDGE LENGTH: 50.6226 IN.

LINEAR EDGES BETWEEN TYPES (INCHES)

	Man-Made	Grass	Trees	Road	Water	Sky	Soil	Mountain
Man-Made	0.0000	0.8800	0.0000	0.0000	0.4984	0.0000	0.2810	0.0000
Grass	0.8800	10.9255	4.6391	8.0816	17.2934	0.0000	2.0979	0.0000
Trees	0.0000	4.6391	0.0000	0.0000	0.0000	4.7451	0.0000	0.0000
Road	0.0000	8.0816	0.0000	0.0000	1.1805	0.0000	0.0000	0.0000
Water	0.4984	17.2934	0.0000	1.1805	0.0000	0.0000	0.0000	0.0000
Sky	0.0000	0.0000	4.7451	0.0000	0.0000	0.0000	0.0000	0.0000
Soil	0.2810	2.0979	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mountain	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

NUMBER OF VEHICLES: 0

GREEN VEGETATION PRESENT: NO

(Continued)

Table A4 (Continued)

Scene #1C - March TOTAL AREA: 22.1360 SQ IN.

RECORD NUMBER	AREA OR OBJECT	CHARACTERISTIC	COLOR	POLYGON AREA (SQ IN.)	PERCENTAGE OF AREA	POLYGON PERIMETER (INCHES)
2	Sky	None	Blue	0.3776	1.71	9.4545
3	Trees	Leaves Off	Brown	2.0044	9.06	10.3225
4	Man-Made	Metal Pole	Brown	0.0423	0.19	1.6460
5	Grass	Tall Field	Tan	0.2743	1.24	6.3202
6	Grass	Tall Field	Tan	0.1084	0.49	2.7250
7	Grass	Tall Field	Tan	0.0139	0.06	0.5106
8	Water	Open Water	Blue	0.1895	0.86	2.8345
9	Water	Open Water	Blue	0.4727	2.14	6.6486
10	Water	Open Water	Blue	0.0189	0.09	0.5585
11	Man-Made	Metal Pole	Brown	0.0041	0.02	0.2746
12	Grass	Short Field	Tan	1.7716	8.00	11.7944
13	Grass	Short Field	Tan	0.0062	0.03	0.3755
14	Man-Made	Telephone Pole	Brown	0.0137	0.06	0.8256
15	Grass	Bushy Area	Brown	0.8921	4.03	10.5129
16	Grass	Tall Field	Tan	2.3600	10.66	10.2848
17	Grass	Short Field	Tan	0.9011	4.07	9.8057
18	Man-Made	Concrete	Gray	0.0471	0.21	0.9230
19	Road	Dirt	Sandy	0.2720	1.23	8.0084
20	Road	Dirt	Sandy	0.0188	0.08	0.8067
21	Grass	Tall Field	Tan	0.4649	2.10	9.5867
22	Water	Marshy Area	Tan	2.2162	10.01	10.1943
23	Grass	Short Field	Tan	9.6664	43.67	13.4833

NUMBER OF POLYGONS: 22
DIFFERENT TYPES OF OBJECTS: 6

PERCENTAGE OF AREA FOR TYPE Man-Made IS 0.48%
PERCENTAGE OF AREA FOR TYPE Grass IS 74.35%
PERCENTAGE OF AREA FOR TYPE Trees IS 9.06%
PERCENTAGE OF AREA FOR TYPE Road IS 1.31%
PERCENTAGE OF AREA FOR TYPE Water IS 13.09%
PERCENTAGE OF AREA FOR TYPE Sky IS 1.71%
PERCENTAGE OF AREA FOR TYPE Soil IS 0.00%
PERCENTAGE OF AREA FOR TYPE Mountain IS 0.00%

TOTAL EDGE LENGTH: 54.5371 IN.

LINEAR EDGES BETWEEN TYPES (INCHES)

	Man-Made	Grass	Trees	Road	Water	Sky	Soil	Mountain
Man-Made	0.0000	2.6223	0.1934	0.103	0.7444	0.0000	0.0000	0.0000
Grass	2.6223	14.7529	4.5621	8.5921	18.3054	0.0000	0.0000	0.0000
Trees	0.1934	4.5621	0.0000	0.0000	0.0000	4.6554	0.0000	0.0000
Road	0.1093	8.5921	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water	0.7444	18.3054	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Sky	0.0000	0.0000	4.6554	0.0000	0.0000	0.0000	0.0000	0.0000
Soil	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mountain	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

NUMBER OF VEHICLES: 0
GREEN VEGETATION PRESENT: NO

(Continued)

Table A4 (Continued)

Scene #11 - March TOTAL AREA: 21.9763 SQ IN.

RECORD NUMBER	AREA OR OBJECT	CHARACTERISTIC	COLOR	POLYGON AREA (SQ IN.)	PERCENTAGE OF AREA	POLYGON PERIMETER (INCHES)
2	Sky	None	Blue	0.2095	0.95	5.5945
3	Trees	Leaves Off	Brown	2.0837	9.48	10.3818
4	Sky	None	Blue	0.0067	0.03	0.4497
5	Sky	None	Blue	0.1222	0.56	3.0221
6	Grass	Short Field	Tan	0.0443	0.20	1.5457
7	Man-Made	Telephone Pole	Gray	0.0146	0.07	0.7094
8	Grass	Short Field	Tan	0.3492	1.59	8.0631
9	Water	Open Water	Blue	0.1046	0.48	1.6549
10	Water	Open Water	Blue	0.4923	2.24	6.8675
11	Man-Made	Telephone Pole	Brown	0.0176	0.08	0.7797
12	Water	Open Water	Blue	0.0820	0.37	1.4506
13	Grass	Short Field	Tan	1.1369	5.17	10.9753
14	Grass	Bushy Area	Brown	1.1161	5.08	10.4370
15	Man-Made	Metal Pole	Silver	0.0169	0.08	0.6360
16	Grass	Tall Field	Tan	2.5021	11.39	10.5149
17	Grass	Short Field	Tan	1.1864	5.40	9.7963
18	Road	Dirt	Sandy	0.2878	1.31	9.3799
19	Grass	Short Field	Tan	11.5470	52.54	19.6787
20	Water	Marshy Area	Tan	0.6564	2.99	5.9293

NUMBER OF POLYGONS: 19
DIFFERENT TYPES OF OBJECTS: 6

PERCENTAGE OF AREA FOR TYPE Man-Made IS 0.22%
PERCENTAGE OF AREA FOR TYPE Grass IS 81.37%
PERCENTAGE OF AREA FOR TYPE Trees IS 9.48%
PERCENTAGE OF AREA FOR TYPE Road IS 1.31%
PERCENTAGE OF AREA FOR TYPE Water IS 6.08%
PERCENTAGE OF AREA FOR TYPE Sky IS 1.54%
PERCENTAGE OF AREA FOR TYPE Soil IS 0.00%
PERCENTAGE OF AREA FOR TYPE Mountain IS 0.00%

TOTAL EDGE LENGTH: 49.5565 IN.

LINEAR EDGES BETWEEN TYPES (INCHES)

	Man-Made	Grass	Trees	Road	Water	Sky	Soil	Mountain
Man-Made	0.0000	1.3536	0.1422	0.0000	0.6293	0.0000	0.0000	0.0000
Grass	1.3536	14.4241	4.6255	9.2549	14.6147	0.0000	0.0000	0.0000
Trees	0.1422	4.6255	0.0000	0.0000	0.0000	4.5122	0.0000	0.0000
Road	0.0000	9.2549	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water	0.6293	14.6147	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Sky	0.0000	0.0000	4.5122	0.0000	0.0000	0.0000	0.0000	0.0000
Soil	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mountain	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

NUMBER OF VEHICLES: 0

GREEN VEGETATION PRESENT: NO

(Continued)

Table A4 (Continued)

Scene #12 - March TOTAL AREA: 22.1366 SQ IN.

RECORD NUMBER	AREA OR OBJECT	CHARACTERISTIC	COLOR	POLYGON AREA (SQ IN.)	PERCENTAGE OF AREA	POLYGON PERIMETER (INCHES)
2	Sky	None	Blue	0.7886	3.56	10.5281
3	Trees	Leaves Off	Brown	1.5689	7.09	9.9680
4	Grass	Short Field	Tan	0.4996	2.26	9.5819
5	Water	Open Water	Blue	0.7652	3.46	9.6668
6	Grass	Tall Field	Tan	4.7910	21.64	11.3759
7	Grass	Short Field	Tan	1.2401	5.60	9.8375
8	Road	Dirt	Sandy	0.2712	1.23	9.4417
9	Grass	Short Field	Tan	12.2120	55.17	14.5731

NUMBER OF POLYGONS: 8
DIFFERENT TYPES OF OBJECTS: 5

PERCENTAGE OF AREA FOR TYPE Man-Made IS 0.00%
PERCENTAGE OF AREA FOR TYPE Grass IS 84.67%
PERCENTAGE OF AREA FOR TYPE Trees IS 7.09%
PERCENTAGE OF AREA FOR TYPE Road IS 1.23%
PERCENTAGE OF AREA FOR TYPE Water IS 3.46%
PERCENTAGE OF AREA FOR TYPE Sky IS 3.56%
PERCENTAGE OF AREA FOR TYPE Soil IS 0.00%
PERCENTAGE OF AREA FOR TYPE Mountain IS 0.00%

TOTAL EDGE LENGTH: 33.0840 IN.

LINEAR EDGES BETWEEN TYPES (INCHES)

	Man-Made	Grass	Trees	Road	Water	Sky	Soil	Mountain
Man-Made	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Grass	0.0000	4.6589	4.4934	9.3168	9.3305	0.1778	0.0000	0.0000
Trees	0.0000	4.4934	0.0000	0.0000	0.0000	5.1066	0.0000	0.0000
Road	0.0000	9.3168	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water	0.0000	9.3305	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Sky	0.0000	0.1778	5.1066	0.0000	0.0000	0.0000	0.0000	0.0000
Soil	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mountain	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

NUMBER OF VEHICLES: 0

GREEN VEGETATION PRESENT: NO

(Continued)

Table A4 (Continued)

Scene #13 - March TOTAL AREA: 22.0851 SQ IN.

RECORD NUMBER	AREA OR OBJECT	CHARACTERISTIC	COLOR	POLYGON AREA (SQ IN.)	PERCENTAGE OF AREA	POLYGON PERIMETER (INCHES)
2	Sky	None	Blue	1.9035	8.62	10.0732
3	Trees	Leaves Off	Brown	0.4435	2.01	9.4473
4	Water	Open Water	Blue	0.3581	1.62	9.3897
5	Grass	Short Field	Tan	0.4963	2.25	9.5136
6	Water	Open Water	Blue	0.6012	2.72	7.5664
7	Trees	Leaves Off	Brown	0.0351	0.16	0.7735
8	Water	Open Water	Blue	0.1295	0.59	2.2133
9	Grass	Tall Field	Tan	4.7860	21.67	11.3678
10	Grass	Short Field	Tan	1.4192	6.43	9.8201
11	Road	Dirt	Sandy	0.2900	1.31	9.3916
12	Grass	Short Field	Tan	11.6228	52.63	14.2954

NUMBER OF POLYGONS: 11
DIFFERENT TYPES OF OBJECTS: 5

PERCENTAGE OF AREA FOR TYPE Man-Made IS 0.00%
PERCENTAGE OF AREA FOR TYPE Grass IS 82.97%
PERCENTAGE OF AREA FOR TYPE Trees IS 2.17%
PERCENTAGE OF AREA FOR TYPE Road IS 1.31%
PERCENTAGE OF AREA FOR TYPE Water IS 4.93%
PERCENTAGE OF AREA FOR TYPE Sky IS 8.62%
PERCENTAGE OF AREA FOR TYPE Soil IS 0.00%
PERCENTAGE OF AREA FOR TYPE Mountain IS 0.00%

TOTAL EDGE LENGTH: 37.5257 IN.

LINEAR EDGES BETWEEN TYPES (INCHES)

	Man-Made	Grass	Trees	Road	Water	Sky	Soil	Mountain
Man-Made	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Grass	0.0000	4.6369	0.3325	9.2612	13.6047	0.0000	0.0000	0.0000
Trees	0.0000	0.3325	0.0000	0.0000	5.0663	4.6241	0.0000	0.0000
Road	0.0000	9.2612	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water	0.0000	13.6047	5.0663	0.0000	0.0000	0.0000	0.0000	0.0000
Sky	0.0000	0.0000	4.6241	0.0000	0.0000	0.0000	0.0000	0.0000
Soil	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mountain	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

NUMBER OF VEHICLES: 0

GREEN VEGETATION PRESENT: NO

(Continued)

Table A4 (Continued)

Scene #14 - March TOTAL AREA: 22.0828 SQ IN.

RECORD NUMBER	AREA OR OBJECT	CHARACTERISTIC	COLOR	POLYGON AREA (SQ IN.)	PERCENTAGE OF AREA	POLYGON PERIMETER (INCHES)
2	Sky	None	Blue	1.4099	6.38	9.8948
3	Trees	Leaves Off	Brown	0.4730	2.14	9.4940
4	Water	Open Water	Blue	1.4005	6.34	17.4771
5	Grass	Short Field	Tan	0.3075	1.39	7.6351
6	Grass	Tall Field	Tan	4.9635	22.48	11.5110
7	Grass	Short Field	Tan	1.3044	5.91	9.7556
8	Road	Dirt	Sandy	0.3078	1.39	9.4255
9	Grass	Short Field	Tan	11.9164	53.96	14.3916

NUMBER OF POLYGONS: 8
DIFFERENT TYPES OF OBJECTS: 5

PERCENTAGE OF AREA FOR TYPE Man-Made IS 0.00%
PERCENTAGE OF AREA FOR TYPE Grass IS 83.74%
PERCENTAGE OF AREA FOR TYPE Trees IS 2.14%
PERCENTAGE OF AREA FOR TYPE Road IS 1.39%
PERCENTAGE OF AREA FOR TYPE Water IS 6.34%
PERCENTAGE OF AREA FOR TYPE Sky IS 6.38%
PERCENTAGE OF AREA FOR TYPE Soil IS 0.00%
PERCENTAGE OF AREA FOR TYPE Mountain IS 0.00%

TOTAL EDGE LENGTH: 35.3928 IN.

LINEAR EDGES BETWEEN TYPES (INCHES)

	Man-Made	Grass	Trees	Road	Water	Sky	Soil	Mountain
Man-Made	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Grass	0.0000	4.6546	0.0000	9.2732	12.1827	0.0000	0.0000	0.0000
Trees	0.0000	0.0000	0.0000	0.0000	4.6389	4.6435	0.0000	0.0000
Road	0.0000	9.2732	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water	0.0000	12.1827	4.6389	0.0000	0.0000	0.0000	0.0000	0.0000
Sky	0.0000	0.0000	4.6435	0.0000	0.0000	0.0000	0.0000	0.0000
Soil	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mountain	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

NUMBER OF VEHICLES: 0

GREEN VEGETATION PRESENT: NO

(Continued)

Table A4 (Continued)

Scene #15 - March TOTAL AREA: 22.1876 SQ IN.

RECORD NUMBER	AREA OR OBJECT	CHARACTERISTIC	COLOR	POLYGON AREA (SQ IN.)	PERCENTAGE OF AREA	POLYGON PERIMETER (INCHES)
2	Sky	None	Blue	1.2021	5.42	9.8708
3	Trees	Leaves Off	Brown	0.7777	3.51	9.6278
4	Water	Open Water	Blue	1.7020	7.67	10.0181
5	Grass	Tall Field	Tan	5.0861	22.92	11.9658
6	Man-Made	Concrete	Gray	0.1919	0.86	2.0918
7	Road	Gravel	Gray	0.3698	1.67	9.6938
8	Grass	Short Field	Tan	0.1289	0.58	4.2252
9	Grass	Short Field	Tan	0.6601	2.98	9.9923
10	Road	Dirt	Sandy	0.2801	1.26	9.4657
11	Grass	Short Field	Tan	10.8865	49.07	25.2770
12	Man-Made	Building	Gray	0.4886	2.20	3.5985
13	Road	Pavement	Gray	0.4138	1.87	9.3076

NUMBER OF POLYGONS: 12
DIFFERENT TYPES OF OBJECTS: 6

PERCENTAGE OF AREA FOR TYPE Man-Made IS 3.07%
PERCENTAGE OF AREA FOR TYPE Grass IS 75.54%
PERCENTAGE OF AREA FOR TYPE Trees IS 3.51%
PERCENTAGE OF AREA FOR TYPE Road IS 4.79%
PERCENTAGE OF AREA FOR TYPE Water IS 7.67%
PERCENTAGE OF AREA FOR TYPE Sky IS 5.42%
PERCENTAGE OF AREA FOR TYPE Soil IS 0.00%
PERCENTAGE OF AREA FOR TYPE Mountain IS 0.00%

TOTAL EDGE LENGTH: 48.1452 IN.

LINEAR EDGES BETWEEN TYPES (INCHES)

	Man-Made	Grass	Trees	Road	Water	Sky	Soil	Mountain
Man-Made	0.0000	4.7813	0.0000	0.9090	0.0000	0.0000	0.0000	0.0000
Grass	4.7813	1.3215	0.0000	27.1633	4.6567	0.0000	0.0000	0.0000
Trees	0.0000	0.0000	0.0000	0.0000	4.6412	4.6721	0.0000	0.0000
Road	0.9090	27.1633	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water	0.0000	4.6567	4.6412	0.0000	0.0000	0.0000	0.0000	0.0000
Sky	0.0000	0.0000	4.6721	0.0000	0.0000	0.0000	0.0000	0.0000
Soil	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mountain	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

NUMBER OF VEHICLES: 0

GREEN VEGETATION PRESENT: NO

(Continued)

Table A4 (Continued)

Scene #16 - March TOTAL AREA: 22.0158 SQ IN.

RECORD NUMBER	AREA OR OBJECT	CHARACTERISTIC	COLOR	POLYGON AREA (SQ IN.)	PERCENTAGE OF AREA	POLYGON PERIMETER (INCHES)
2	Sky	None	Blue	0.9126	4.15	9.6231
3	Man-Made	Water Tower	White	0.0103	0.05	0.4033
4	Trees	Leaves Off	Brown	0.7617	3.46	9.9006
5	Water	Open Water	Blue	1.7213	7.82	10.0518
6	Grass	Tall Field	Tan	5.0968	23.15	12.1029
7	Man-Made	Concrete	Gray	0.0244	0.11	0.6122
8	Grass	Short Field	Tan	0.5400	2.45	9.5084
9	Road	Gravel	Gray	0.3466	1.57	9.3934
10	Grass	Short Field	Tan	0.4265	1.94	9.5132
11	Road	Dirt	Sandy	0.7636	3.47	10.7577
12	Grass	Short Field	Tan	4.8047	21.82	12.0316
13	Grass	Short Field	Tan	0.0061	0.03	0.3745
14	Road	Pavement	Gray	0.4425	2.01	9.4723
15	Grass	Short Field	Tan	6.1587	27.97	11.9192

NUMBER OF POLYGONS: 14
DIFFERENT TYPES OF OBJECTS: 6

PERCENTAGE OF AREA FOR TYPE Man-Made IS 0.16%
PERCENTAGE OF AREA FOR TYPE Grass IS 77.37%
PERCENTAGE OF AREA FOR TYPE Trees IS 3.46%
PERCENTAGE OF AREA FOR TYPE Road IS 7.05%
PERCENTAGE OF AREA FOR TYPE Water IS 7.82%
PERCENTAGE OF AREA FOR TYPE Sky IS 4.15%
PERCENTAGE OF AREA FOR TYPE Soil IS 0.00%
PERCENTAGE OF AREA FOR TYPE Mountain IS 0.00%

TOTAL EDGE LENGTH: 48.4470 IN.

LINEAR EDGES BETWEEN TYPES (INCHES)

	Man-Made	Grass	Trees	Road	Water	Sky	Soil	Mountain
Man-Made	0.0000	0.6122	0.2645	0.0000	0.0000	0.1388	0.0000	0.0000
Grass	0.6122	4.6412	0.0000	28.9378	4.6585	0.0000	0.0000	0.0000
Trees	0.2645	0.0000	0.0000	0.0000	4.6427	4.5514	0.0000	0.0000
Road	0.0000	28.9378	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water	0.0000	4.6585	4.6427	0.0000	0.0000	0.0000	0.0000	0.0000
Sky	0.1388	0.0000	4.5514	0.0000	0.0000	0.0000	0.0000	0.0000
Soil	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mountain	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

NUMBER OF VEHICLES: 0

GREEN VEGETATION PRESENT: NO

(Continued)

Table A4 (Continued)

Scene #17 - March TOTAL AREA: 22.2089 SQ IN.

RECORD NUMBER	AREA OR OBJECT	CHARACTERISTIC	COLOR	POLYGON AREA (SQ IN.)	PERCENTAGE OF AREA	POLYGON PERIMETER (INCHES)
2	Sky	None	Blue	0.7453	3.36	9.6698
3	Trees	Leaves Off	Brown	1.1395	5.13	10.2925
4	Man-Made	Unknown	White	0.0089	0.04	0.4454
5	Water	Open Water	Blue	1.7381	7.83	11.2427
6	Man-Made	Telephone Pole	Gray	0.0156	0.07	0.7421
7	Man-Made	Telephone Pole	Brown	0.0073	0.03	0.5045
8	Grass	Tall Field	Tan	4.2324	19.06	15.3745
9	Road	Gravel	Gray	0.1732	0.78	4.2617
10	Man-Made	Target	Gray	0.0108	0.05	0.4471
11	Grass	Short Field	Tan	1.1020	4.96	11.3252
12	Road	Gravel	Gray	0.2739	1.23	7.0293
13	Road	Gravel	Gray	0.3459	1.56	9.4501
14	Grass	Short Field	Tan	1.7722	7.98	10.3205
15	Road	Dirt	Sandy	0.4752	2.14	10.3009
16	Grass	Short Field	Tan	3.7479	16.88	10.9097
17	Road	Gravel	Gray	0.4602	2.07	9.5003
18	Grass	Short Field	Tan	5.0803	22.87	13.3870
19	Man-Made	Target	White	0.8657	3.90	3.7137
20	Grass	Short Field	Tan	0.0086	0.04	0.6275
21	Man-Made	Target	White	0.0061	0.03	0.6040

NUMBER OF POLYGONS: 20
DIFFERENT TYPES OF OBJECTS: 6

PERCENTAGE OF AREA FOR TYPE Man-Made IS 4.12%
PERCENTAGE OF AREA FOR TYPE Grass IS 71.79%
PERCENTAGE OF AREA FOR TYPE Trees IS 5.13%
PERCENTAGE OF AREA FOR TYPE Road IS 7.78%
PERCENTAGE OF AREA FOR TYPE Water IS 7.83%
PERCENTAGE OF AREA FOR TYPE Sky IS 3.36%
PERCENTAGE OF AREA FOR TYPE Soil IS 0.00%
PERCENTAGE OF AREA FOR TYPE Mountain IS 0.00%

TOTAL EDGE LENGTH: 60.6477 IN.

LINEAR EDGES BETWEEN TYPES (INCHES)

	Man-Made	Grass	Trees	Road	Water	Sky	Soil	Mountain
Man-Made	0.0000	3.6644	0.4454	0.0000	1.2512	0.0000	0.0000	0.0000
Grass	3.6644	1.8336	0.0000	39.5648	4.5204	0.0000	0.0000	0.0000
Trees	0.4454	0.0000	0.0000	0.0000	4.6430	4.7249	0.0000	0.0000
Road	0.0000	39.5648	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water	1.2512	4.5204	4.6430	0.0000	0.0000	0.0000	0.0000	0.0000
Sky	0.0000	0.0000	4.7249	0.0000	0.0000	0.0000	0.0000	0.0000
Soil	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mountain	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

NUMBER OF VEHICLES: 0
GREEN VEGETATION PRESENT: NO

(Continued)

Table A4 (Continued)

Scene #18 - March TOTAL AREA: 22.1386 SQ IN.

RECORD NUMBER	AREA OR OBJECT	CHARACTERISTIC	COLOR	POLYGON AREA (SQ IN.)	PERCENTAGE OF AREA	POLYGON PERIMETER (INCHES)
2	Sky	None	Blue	0.7926	3.58	9.5840
3	Trees	Leaves Off	Brown	1.2703	5.74	9.9279
4	Water	Open Water	Blue	1.9708	8.90	10.0963
5	Grass	Tall Field	Tan	4.4422	20.07	11.1414
6	Grass	Short Field	Tan	0.5480	2.48	3.4364
7	Road	Gravel	Gray	0.1611	0.73	6.7807
8	Grass	Tall Field	Tan	0.6042	2.73	7.4110
9	Road	Gravel	Gray	0.2463	1.11	9.3851
10	Grass	Short Field	Tan	5.9432	26.85	11.8259
11	Road	Gravel	Gray	0.3803	1.72	9.4033
12	Grass	Short Field	Tan	5.7148	25.81	11.6160
13	Road	Pavement	Gray	0.0649	0.29	1.3758

NUMBER OF POLYGONS: 12
DIFFERENT TYPES OF OBJECTS: 5

PERCENTAGE OF AREA FOR TYPE Man-Made IS 0.00%
PERCENTAGE OF AREA FOR TYPE Grass IS 77.93%
PERCENTAGE OF AREA FOR TYPE Trees IS 5.74%
PERCENTAGE OF AREA FOR TYPE Road IS 3.85%
PERCENTAGE OF AREA FOR TYPE Water IS 8.90%
PERCENTAGE OF AREA FOR TYPE Sky IS 3.58%
PERCENTAGE OF AREA FOR TYPE Soil IS 0.00%
PERCENTAGE OF AREA FOk TYPE Mountain IS 0.00%

TOTAL EDGE LENGTH: 41.5802 IN.

LINEAR EDGES BETWEEN TYPES (INCHES)

	Man-Made	Grass	Trees	Road	Water	Sky	Soil	Mountain
Man-Made	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Grass	0.0000	1.7627	0.0000	25.8557	4.6364	0.0000	0.0000	0.0000
Trees	0.0000	0.0000	0.0000	0.0000	4.6298	4.6956	0.0000	0.0000
Road	0.0000	25.8557	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water	0.0000	4.6364	4.6298	0.0000	0.0000	0.0000	0.0000	0.0000
Sky	0.0000	0.0000	4.6956	0.0000	0.0000	0.0000	0.0000	0.0000
Soil	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mountain	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

NUMBER OF VEHICLES: 0

GREEN VEGETATION PRESENT: NO

(Continued)

Table A4 (Continued)

Scene #19 - March TOTAL AREA: 22.0630 SQ IN.

RECORD NUMBER	AREA OR OBJECT	CHARACTERISTIC	COLOR	POLYGON AREA (SQ IN.)	PERCENTAGE OF AREA	POLYGON PERIMETER (INCHES)
2	Trees	Leaves Off	Brown	1.4212	6.44	10.4910
3	Sky	None	Blue	0.1338	0.61	3.5747
4	Trees	Leaves Off	Brown	2.2035	9.99	10.2735
5	Water	Open Water	Blue	0.1333	0.60	3.4730
6	Water	Open Water	Blue	0.3387	1.54	4.2252
7	Trees	Leaves Off	Brown	0.1401	0.64	1.6941
8	Grass	Tall Field	Tan	3.5049	15.89	17.3635
9	Grass	Bushy Area	Brown	0.5698	2.58	6.2258
10	Road	Gravel	Gray	0.3961	1.80	9.4135
11	Grass	Tall Field	Tan	0.8411	3.81	9.6911
12	Road	Gravel	Gray	0.1091	0.49	3.1159
13	Man-Made	Target	Sandy	0.2581	1.17	2.0253
14	Road	Gravel	Gray	0.2691	1.22	5.4267
15	Grass	Short Field	Tan	5.0679	22.97	12.8669
16	Road	Gravel	Gray	0.0281	0.13	0.9256
17	Road	Pavement	Gray	3.3103	15.00	10.7177
18	Road	Gravel	Gray	0.3579	1.62	6.9837
19	Grass	Short Field	Tan	1.4491	6.57	6.9030
20	Grass	Short Field	Tan	1.5308	6.94	6.4703

NUMBER OF POLYGONS: 19
DIFFERENT TYPES OF OBJECTS: 6

PERCENTAGE OF AREA FOR TYPE Man-Made IS 1.17%
PERCENTAGE OF AREA FOR TYPE Grass IS 58.76%
PERCENTAGE OF AREA FOR TYPE Trees IS 17.06%
PERCENTAGE OF AREA FOR TYPE Road IS 20.26%
PERCENTAGE OF AREA FOR TYPE Water IS 2.14%
PERCENTAGE OF AREA FOR TYPE Sky IS 0.61%
PERCENTAGE OF AREA FOR TYPE Soil IS 0.00%
PERCENTAGE OF AREA FOR TYPE Mountain IS 0.00%

TOTAL EDGE LENGTH: 56.5350 IN.

LINEAR EDGES BETWEEN TYPES (INCHES)

	Man-Made	Grass	Trees	Road	Water	Sky	Soil	Mountain
Man-Made	0.0000	1.8878	0.0000	0.1375	0.0000	0.0000	0.0000	0.0000
Grass	1.8878	6.1084	4.6676	31.7118	0.3167	0.0000	0.0000	0.0000
Trees	0.0000	4.6676	2.1040	0.0000	7.2424	1.7440	0.0000	0.0000
Road	0.1375	31.7118	0.0000	0.6150	0.0000	0.0000	0.0000	0.0000
Water	0.0000	0.3167	7.2424	0.0000	0.0000	0.0000	0.0000	0.0000
Sky	0.0000	0.0000	1.7440	0.0000	0.0000	0.0000	0.0000	0.0000
Soil	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mountain	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

NUMBER OF VEHICLES: 0

GREEN VEGETATION PRESENT: NO

(Continued)

Table A4 (Continued)

Scene #20 - March TOTAL AREA: 22.1054 SQ IN.

RECORD NUMBER	AREA OR OBJECT	CHARACTERISTIC	COLOR	POLYGON AREA (SQ IN.)	PERCENTAGE OF AREA	POLYGON PERIMETER (INCHES)
2	Sky	None	Blue	0.1179	0.53	3.8644
3	Trees	Leaves Off	Brown	1.3513	6.11	9.9069
4	Grass	Short Field	Tan	0.1202	0.54	2.8664
5	Grass	Short Field	Tan	0.2246	1.02	4.6056
6	Grass	Short Field	Tan	0.0110	0.05	0.6104
7	Trees	Leaves Off	Brown	0.4754	2.15	3.2389
8	Trees	Leaves Off	Brown	0.0568	0.26	1.3555
9	Water	Open Water	Blue	0.4267	1.93	3.2910
10	Water	Open Water	Blue	1.3664	6.18	6.7963
11	Grass	Tall Field	Tan	3.9153	17.71	14.0700
12	Grass	Short Field	Tan	1.0543	4.77	6.8105
13	Road	Pavement	Gray	2.0272	9.17	9.1716
14	Road	Gravel	Gray	0.2987	1.35	6.3238
15	Grass	Short Field	Tan	0.5283	2.39	5.9901
16	Road	Gravel	Gray	0.1803	0.82	5.0540
17	Grass	Short Field	Tan	0.5955	2.69	5.0333
18	Road	Dirt	Sandy	0.0919	0.42	3.6057
19	Grass	Short Field	Tan	7.4309	33.62	15.7154
20	Man-Made	Sign	White	0.0261	0.12	0.6494
21	Road	Gravel	Gray	0.0849	0.38	2.0701
22	Grass	Short Field	Tan	0.1011	0.46	1.6122
23	Man-Made	Metal Pole	Gray	1.6206	7.33	5.1406

NUMBER OF POLYGONS: 22
DIFFERENT TYPES OF OBJECTS: 6

PERCENTAGE OF AREA FOR TYPE Man-Made IS 7.45%
PERCENTAGE OF AREA FOR TYPE Grass IS 63.25%
PERCENTAGE OF AREA FOR TYPE Trees IS 8.52%
PERCENTAGE OF AREA FOR TYPE Road IS 12.14%
PERCENTAGE OF AREA FOR TYPE Water IS 8.11%
PERCENTAGE OF AREA FOR TYPE Sky IS 0.53%
PERCENTAGE OF AREA FOR TYPE Soil IS 0.00%
PERCENTAGE OF AREA FOR TYPE Mountain IS 0.00%

TOTAL EDGE LENGTH: 49.4865 IN.

LINEAR EDGES BETWEEN TYPES (INCHES)

	Man-Made	Grass	Trees	Road	Water	Sky	Soil	Mountain
Man-Made	0.0000	4.3795	0.0000	0.2143	0.0000	0.0000	0.0000	0.0000
Grass	4.3795	3.4984	5.9360	22.8804	6.8587	0.0000	0.0000	0.0000
Trees	0.0000	5.9360	0.0328	0.0000	2.7102	1.9116	0.0000	0.0000
Road	0.2143	22.8804	0.0000	1.0647	0.0000	0.0000	0.0000	0.0000
Water	0.0000	6.8587	2.7102	0.0000	0.0000	0.0000	0.0000	0.0000
Sky	0.0000	0.0000	1.9116	0.0000	0.0000	0.0000	0.0000	0.0000
Soil	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mountain	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

NUMBER OF VEHICLES: 0
GREEN VEGETATION PRESENT: NO

(Continued)

Table A4 (Continued)

Scene #21 - March TOTAL AREA: 22.2558 SQ IN.

RECORD NUMBER	AREA OR OBJECT	CHARACTERISTIC	COLOR	POLYGON AREA (SQ IN.)	PERCENTAGE OF AREA	POLYGON PERIMETER (INCHES)
2	Sky	None	Blue	0.4741	2.13	9.5705
3	Trees	Leaves Off	Brown	1.5829	7.11	10.1003
4	Water	Open Water	Blue	2.1040	9.45	12.2568
5	Trees	Leaves Off	Brown	0.4798	2.16	3.2329
6	Trees	Leaves Off	Brown	0.0867	0.39	1.2237
7	Grass	Tall Field	Tan	6.2828	28.23	14.1021
8	Trees	Leaves Off	Brown	0.0147	0.07	0.5329
9	Trees	Leaves Off	Brown	0.2826	1.27	3.4243
10	Grass	Short Field	Tan	10.9482	49.19	14.0254

NUMBER OF POLYGONS: 9
DIFFERENT TYPES OF OBJECTS: 4

PERCENTAGE OF AREA FOR TYPE Man-Made IS 0.00%
PERCENTAGE OF AREA FOR TYPE Grass IS 77.42%
PERCENTAGE OF AREA FOR TYPE Trees IS 10.99%
PERCENTAGE OF AREA FOR TYPE Road IS 0.00%
PERCENTAGE OF AREA FOR TYPE Water IS 9.45%
PERCENTAGE OF AREA FOR TYPE Sky IS 2.13%
PERCENTAGE OF AREA FOR TYPE Soil IS 0.00%
PERCENTAGE OF AREA FOR TYPE Mountain IS 0.00%

TOTAL EDGE LENGTH: 24.7982 IN.

LINEAR EDGES BETWEEN TYPES (INCHES)

	Man-Made	Grass	Trees	Road	Water	Sky	Soil	Mountain
Man-Made	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Grass	0.0000	4.6809	4.1323	0.0000	3.4323	0.0000	0.0000	0.0000
Trees	0.0000	4.1323	0.0000	0.0000	7.8223	4.7305	0.0000	0.0000
Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water	0.0000	3.4323	7.8223	0.0000	0.0000	0.0000	0.0000	0.0000
Sky	0.0000	0.0000	4.7305	0.0000	0.0000	0.0000	0.0000	0.0000
Soil	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mountain	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

NUMBER OF VEHICLES: 0

GREEN VEGETATION PRESENT: NO

(Continued)

Table A4 (Concluded)

Scene #22 - March TOTAL AREA: 22.0695 SQ IN.

RECORD NUMBER	AREA OR OBJECT	CHARACTERISTIC	COLOR	POLYGON AREA (SQ IN.)	PERCENTAGE OF AREA	POLYGON PERIMETER (INCHES)
2	Trees	Leaves Off	Brown	9.4016	42.60	15.8780
3	Sky	None	Blue	0.1252	0.57	2.7813
4	Water	Open Water	Blue	0.4436	2.01	3.4904
5	Grass	Tall Field	Tan	0.0522	0.24	1.0966
6	Grass	Tall Field	Tan	0.4075	1.85	5.9513
7	Road	Dirt	Sandy	1.7430	7.90	16.5278
8	Grass	Short Field	Tan	1.4972	6.78	7.8581
9	Grass	Short Field	Tan	8.3779	37.96	13.2170
10	Water	Marshy Area	Blue	0.0214	0.1	0.8140

NUMBER OF POLYGONS: 9
DIFFERENT TYPES OF OBJECTS: 5

PERCENTAGE OF AREA FOR TYPE Man-Made IS 0.00%
PERCENTAGE OF AREA FOR TYPE Grass IS 46.83%
PERCENTAGE OF AREA FOR TYPE Trees IS 42.60%
PERCENTAGE OF AREA FOR TYPE Road IS 7.90%
PERCENTAGE OF AREA FOR TYPE Water IS 2.11%
PERCENTAGE OF AREA FOR TYPE Sky IS 0.57%
PERCENTAGE OF AREA FOR TYPE Soil IS 0.00%
PERCENTAGE OF AREA FOR TYPE Mountain IS 0.00%

TOTAL EDGE LENGTH: 24.4103 IN.

LINEAR EDGES BETWEEN TYPES (INCHES)

	Man-Made	Grass	Trees	Road	Water	Sky	Soil	Mountain
Man-Made	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Grass	0.0000	0.3057	3.2828	13.6948	0.6059	0.0000	0.0000	0.0000
Trees	0.0000	3.2828	0.0000	1.8872	2.7109	1.4702	0.0000	0.0000
Road	0.0000	13.6948	1.8872	0.0000	0.4527	0.0000	0.0000	0.0000
Water	0.0000	0.6059	2.7109	0.4527	0.0000	0.0000	0.0000	0.0000
Sky	0.0000	0.0000	1.4702	0.0000	0.0000	0.0000	0.0000	0.0000
Soil	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mountain	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

NUMBER OF VEHICLES: 0

GREEN VEGETATION PRESENT: NO

(Sheet 22 of 22)

Appendix B
Fort Drum, NY

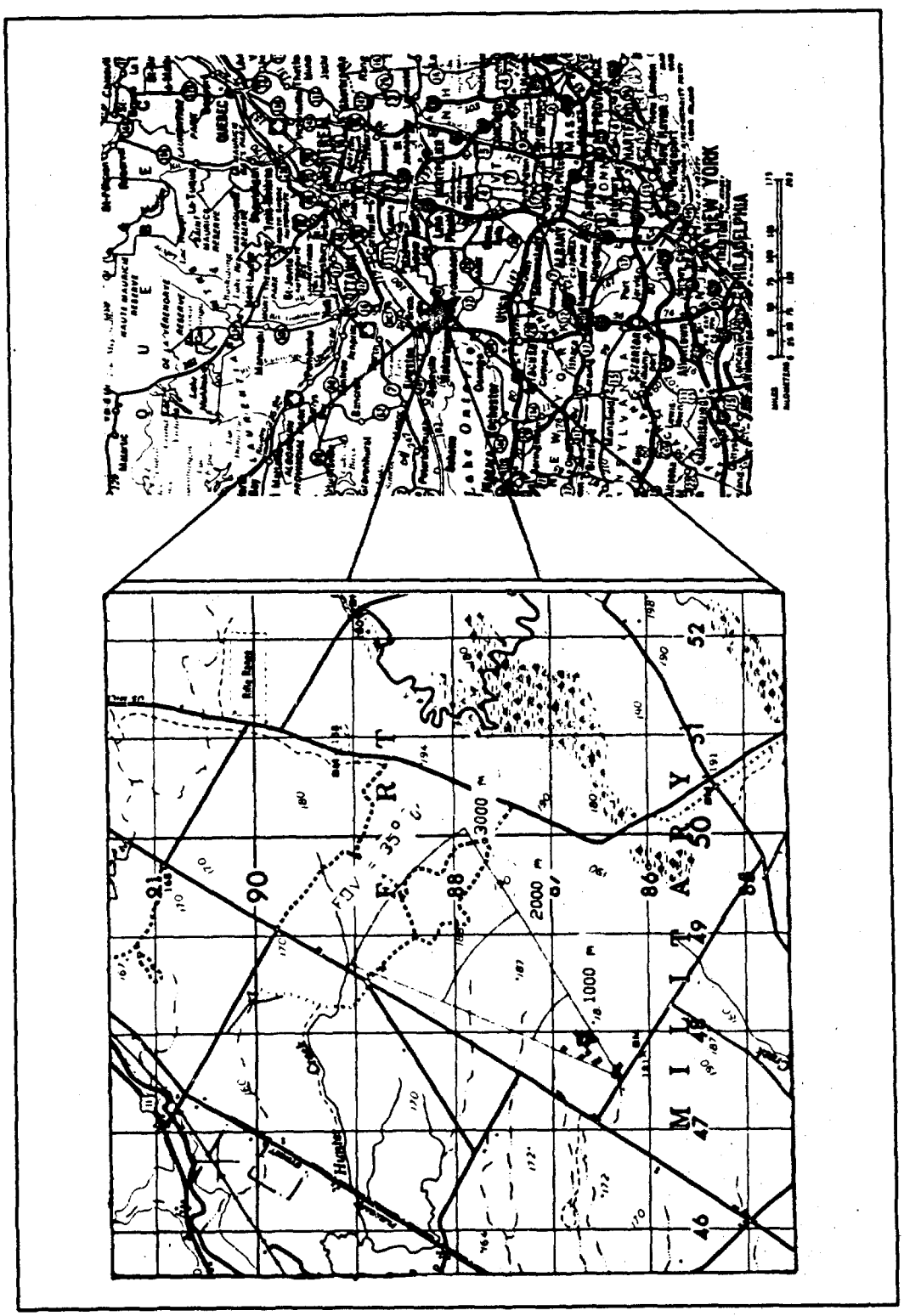


Figure B1. Site location and ground truth locations

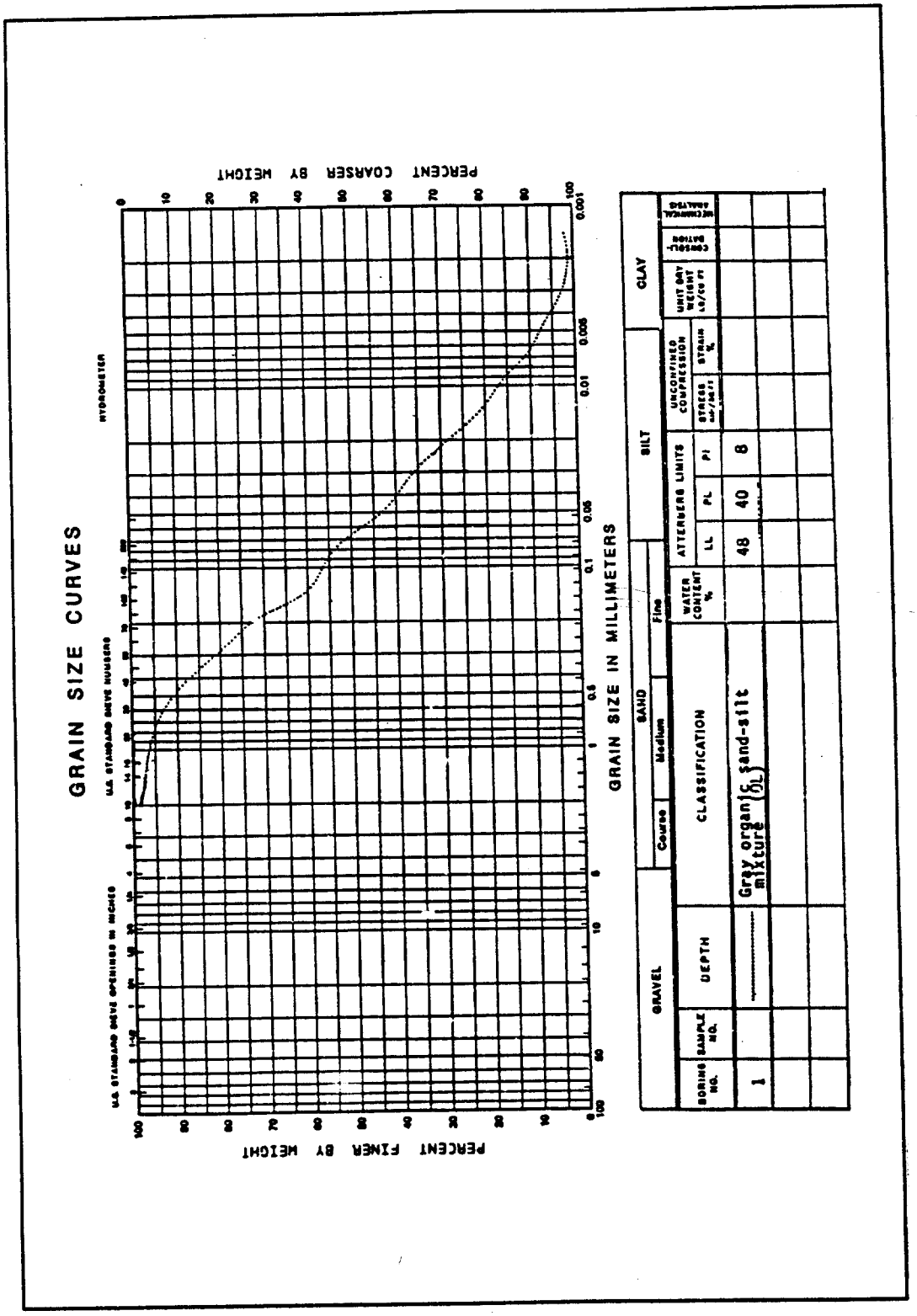


Figure B2. Soils laboratory report

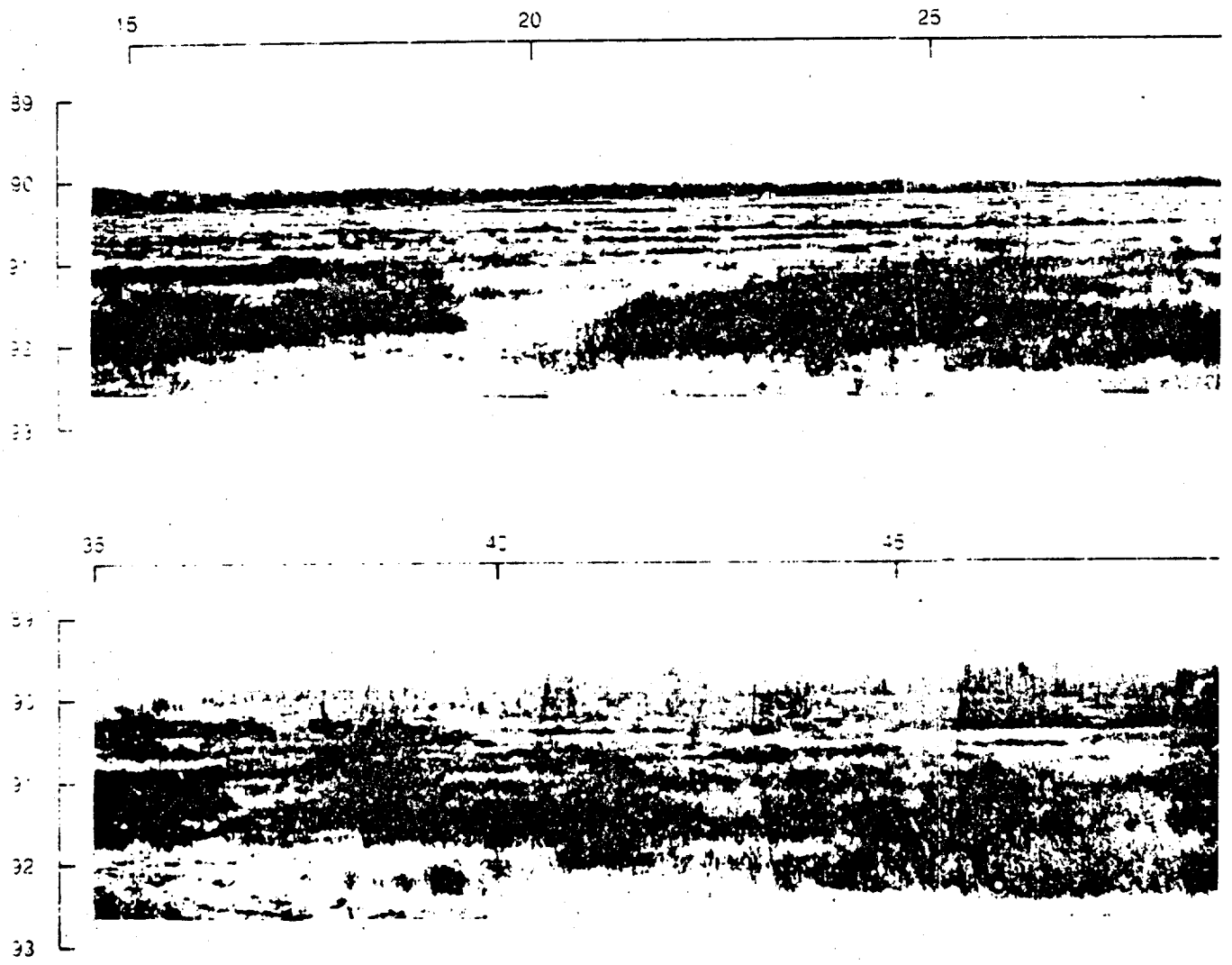
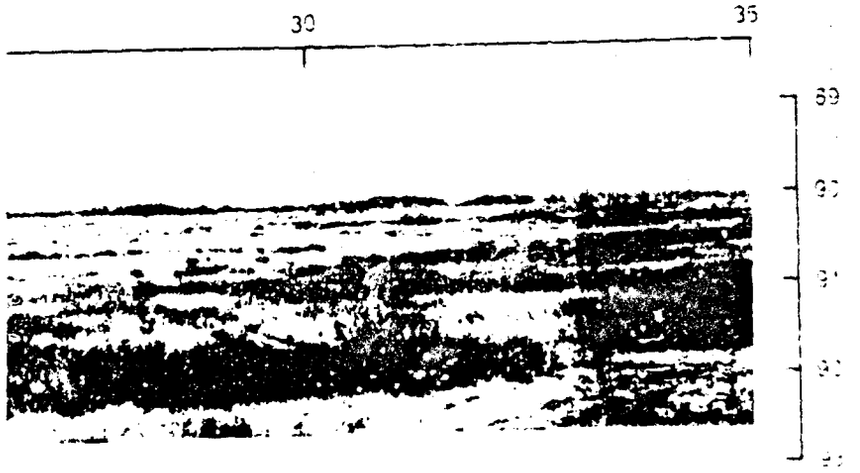


Figure B3. Mosaic photography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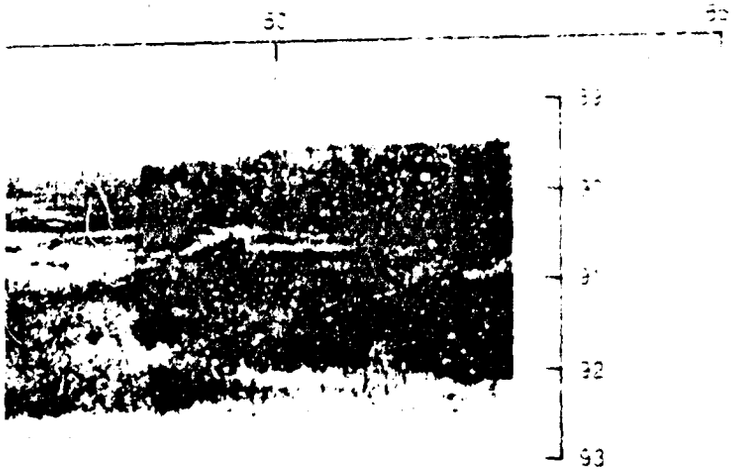
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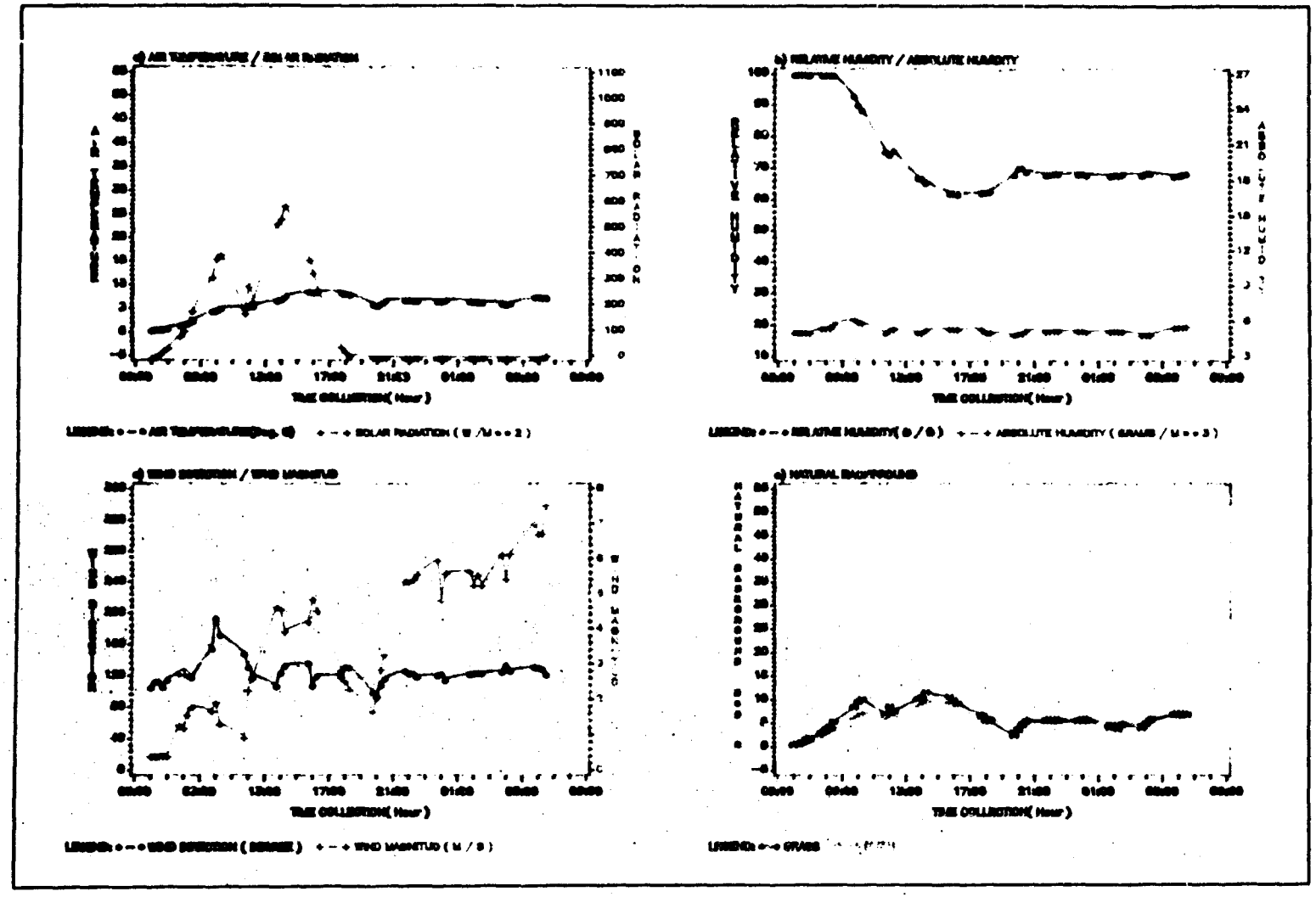


Figure B4. Diurnal meterological summary, 26-27 March 1991

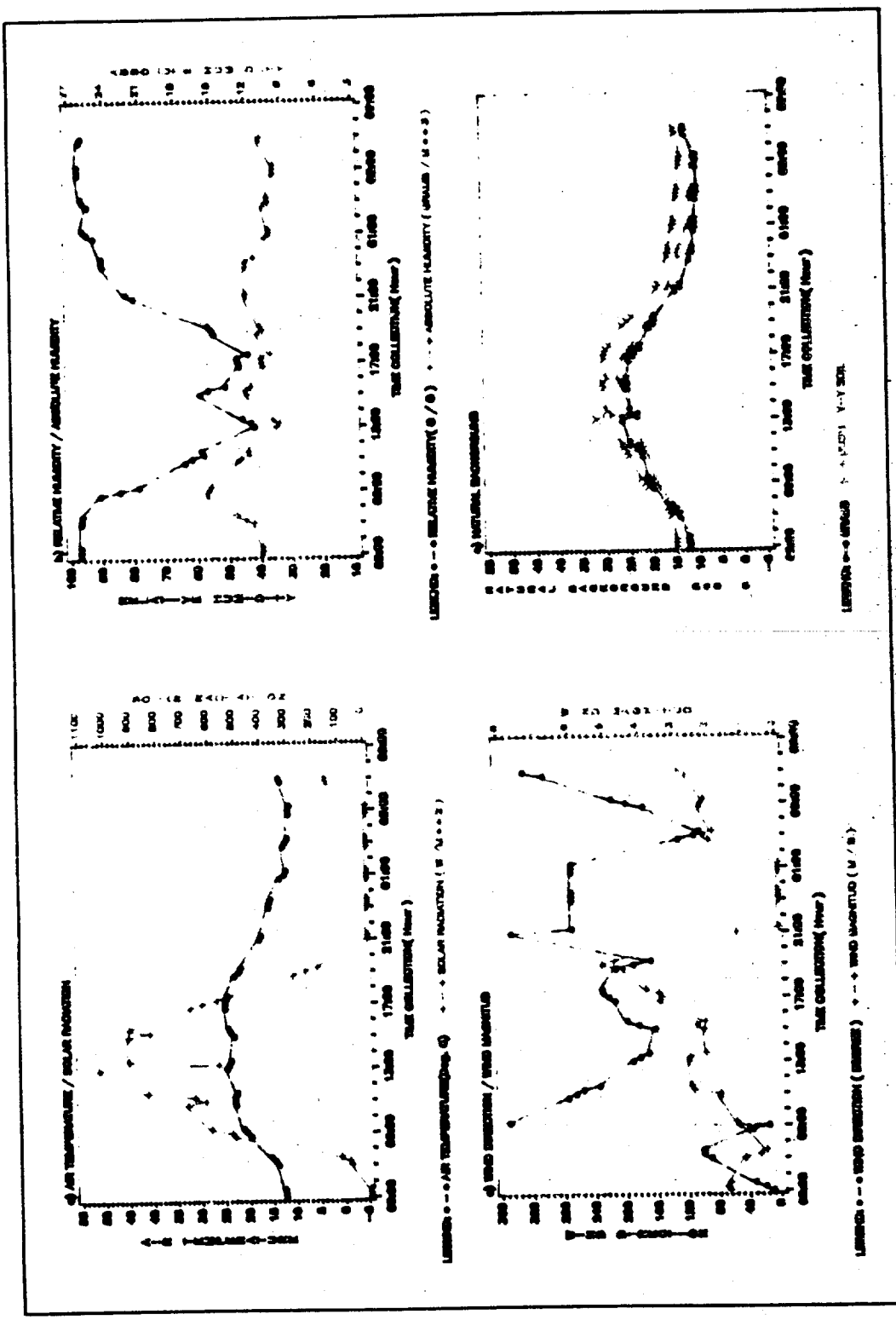


Figure B5. Diurnal meterological summary, 11-12 July 1991

Figure B6. Photointerpretation of scene #13

Table B1
Topographic Survey and Sampling Locations at FTD

TYPE OF MEASUREMENT	VIEW	AZIMUTH ANGLE	ELEVATION ANGLE	SURVEYED RANGE (M)	PASSIVE RANGE (M)	UTM EASTING	UTM NORTHING	ELEVATION (M)
camera pointing angle	1	17.500	90.750	.	270	.	.	.
camera pointing angle	2	20.000	90.750	.	260	.	.	.
camera pointing angle	3	22.500	90.750	.	260	.	.	.
camera pointing angle	4	25.000	90.750	.	270	.	.	.
camera pointing angle	5	27.500	90.750	.	260	.	.	.
camera pointing angle	6	30.000	90.750	.	260	.	.	.
camera pointing angle	7	32.500	90.750	.	260	.	.	.
camera pointing angle	8	35.000	90.750	.	270	.	.	.
camera pointing angle	9	37.500	90.750	.	270	.	.	.
camera pointing angle	10	40.000	90.750	.	280	.	.	.
camera pointing angle	11	42.500	90.750	.	260	.	.	.
camera pointing angle	12	45.000	90.750	.	260	.	.	.
camera pointing angle	13	47.500	90.750	.	260	.	.	.
camera pointing angle	14	50.000	90.750	.	260	.	.	.
surveyed point	.	15.382	94.174	62.44	.	47551.96	86561.29	199.361
surveyed point	.	22.051	90.184	3363.92	.	48798.33	89619.09	193.077
surveyed point	.	23.603	90.204	2691.06	.	48612.93	88967.15	194.304
surveyed point	.	25.477	90.486	659.30	.	47819.03	87096.41	198.319
surveyed point	.	26.338	93.763	67.04	.	47565.12	86561.19	199.506
surveyed point	.	26.519	90.725	452.77	.	47737.59	86906.35	198.175
surveyed point	.	29.054	93.536	68.78	.	47568.78	86561.25	199.664
surveyed point	.	30.470	91.096	300.91	.	47688.00	86760.55	198.153
surveyed point	.	36.229	90.595	416.07	.	47781.33	86836.85	199.583
surveyed point	.	37.919	90.966	277.72	.	47706.09	86720.30	199.222
surveyed point	.	38.892	90.433	544.99	.	47877.61	86925.41	199.790
surveyed point	.	41.893	90.416	483.41	.	47858.23	86861.08	200.395
surveyed point	.	42.001	90.347	571.87	.	47918.10	86926.21	200.443
surveyed point	.	43.704	90.263	640.06	.	47977.68	86963.94	200.974
surveyed point	.	45.629	90.347	485.74	.	47882.66	86840.92	200.967
surveyed point	.	47.980	90.262	.	.	47976.84	86898.96	201.193
surveyed point	.	51.298	90.229	554.42	.	47968.11	86847.91	201.691
surveyed point	.	51.691	90.276	517.28	.	47941.33	86821.91	201.411
surveyed point	.	53.333	90.252	511.44	.	47945.68	86806.66	201.660
surveyed point	.	55.277	90.225	463.43	.	47916.34	86765.22	202.088
surveyed point	.	59.824	92.013	104.60	.	47625.81	86553.79	200.231
surveyed point	.	86.975	91.388	117.37	.	47652.62	86507.44	201.062
soil sample #1	.	.	.	.	.	47662.44	86725.71	198.020
soil sample #2	.	.	.	.	.	47682.93	86718.50	199.000
camera location	.	.	.	.	.	47535.44	86501.24	203.906

Table B2
Vegetation and Soil Moisture Data

Vegetation		
	March (Dormant)	**July (Active)**
Trees: deciduous coniferous	9 to 13 m none	9 to 13 m none
Grass: tall short	0.25 m 0.25 m	0.35 m 0.25 m
Scrub/Bushes	none	none
Soil Moisture		
	March	**July**
Location	1 2	1 2
% Moisture	28% 33%	22% 26%

Table B3
Meterological and Radiometric Data

DAY AND TIME OF COLLECTION	VISITED SITE	AIR TEMP. (C)	SOLAR RADIATION (W/M**2)	WIND MAGNITUD (M/S)	WIND DIRECTION (DEGREES)	RELATIVE HUMIDITY (PERCENT)	BCKGND GRASS (C)	BCKGND BUSH (C)	BCKGND TREE (C)	BCKGND SOIL (C)	BCKGND ROAD (C)
25MAR91:12:00	FTD	2.62	116.70	3.09	253.50	100.00	.	.	.	.	.
25MAR91:12:15	FTD	2.69	105.30	3.60	230.90	99.90	.	.	.	.	.
25MAR91:12:30	FTD	2.83	159.00	3.99	227.70	99.50	.	.	.	.	.
25MAR91:12:45	FTD	3.22	276.60	4.06	224.40	99.00	6.25	4.10	.	.	.
25MAR91:13:00	FTD	3.27	284.20	4.51	230.30	98.20	6.21	4.17	.	.	.
25MAR91:13:15	FTD	3.41	191.00	3.34	214.00	97.90	5.32	3.71	.	.	.
25MAR91:13:30	FTD	3.23	102.20	3.43	209.20	97.80	3.94	3.03	.	.	.
25MAR91:13:45	FTD	3.04	98.80	3.96	215.90	98.10	3.56	2.80	.	.	.
25MAR91:14:00	FTD	3.06	134.20	4.42	229.30	98.20	4.02	2.95	.	.	.
25MAR91:14:15	FTD	3.07	114.70	4.08	227.80	98.30	3.97	2.97	.	.	.
25MAR91:14:30	FTD	3.07	95.80	3.99	228.00	98.40	3.76	2.96	.	.	.
25MAR91:14:45	FTD	3.06	60.90	4.15	232.80	98.10	3.28	2.76	.	.	.
25MAR91:15:00	FTD	3.00	70.90	4.10	243.80	98.00	3.20	2.78	.	.	.
25MAR91:15:15	FTD	3.07	93.90	4.24	243.30	97.70	3.54	3.13	.	.	.
25MAR91:15:30	FTD	3.29	99.00	3.64	240.70	97.50	4.03	3.37	.	.	.
25MAR91:15:45	FTD	3.2*	50.51	3.06	226.80	97.50	3.34	2.96	.	.	.
25MAR91:16:00	FTD	3..	41.17	3.27	231.00	97.60	3.12	2.76	.	.	.
25MAR91:16:15	FTD	3.01	34.37	3.50	230.10	97.70	2.93	2.81	.	.	.
25MAR91:16:30	FTD	3.00	29.91	3.16	230.10	97.70	2.93	2.81	.	.	.
25MAR91:16:45	FTD	2.98	23.30	2.94	228.70	97.80	2.76	2.71	.	.	.
25MAR91:17:00	FTD	2.94	23.57	2.98	226.60	97.90	2.72	2.66	.	.	.
25MAR91:17:15	FTD	2.97	37.41	3.18	230.40	97.90	2.91	2.75	.	.	.
25MAR91:17:30	FTD	3.01	30.05	2.93	223.90	98.00	2.86	2.72	.	.	.
25MAR91:17:45	FTD	2.93	13.30	2.89	223.80	98.10	2.60	2.52	.	.	.
25MAR91:18:00	FTD	2.79	7.18	3.25	216.80	98.30	2.29	2.32	.	.	.
25MAR91:18:15	FTD	2.58	2.48	3.40	220.20	98.60	2.04	2.15	.	.	.
25MAR91:18:30	FTD	2.46	0.00	3.39	217.50	98.70	1.89	1.98	.	.	.
25MAR91:18:45	FTD	2.38	0.00	3.06	217.80	99.00	1.82	1.96	.	.	.
25MAR91:19:00	FTD	2.37	0.00	2.89	213.20	99.20	1.88	1.96	.	.	.
25MAR91:19:15	FTD	2.38	0.00	2.98	211.70	99.30	1.91	1.94	.	.	.
25MAR91:19:30	FTD	2.39	0.00	3.22	208.50	99.30	1.90	1.99	.	.	.
25MAR91:19:45	FTD	2.37	0.00	3.38	212.30	99.40	1.95	1.92	.	.	.
25MAR91:20:00	FTD	2.29	0.00	2.97	232.40	99.60	1.89	1.94	.	.	.
25MAR91:20:15	FTD	2.21	0.00	2.93	229.90	99.90	1.90	1.94	.	.	.
25MAR91:20:30	FTD	2.17	0.00	2.56	243.10	100.00	1.87	1.92	.	.	.
25MAR91:20:45	FTD	2.15	0.00	2.35	260.70	100.00	1.84	1.87	.	.	.
25MAR91:21:00	FTD	2.10	0.00	2.19	273.90	100.00	1.71	1.77	.	.	.
25MAR91:21:15	FTD	2.00	0.00	1.40	264.40	100.00	1.37	1.53	.	.	.
25MAR91:21:30	FTD	1.86	0.00	1.41	263.40	100.00	1.26	1.51	.	.	.
25MAR91:21:45	FTD	1.79	0.00	1.38	271.10	100.00	1.32	1.46	.	.	.
25MAR91:22:00	FTD	1.70	0.00	0.56	259.30	100.00	1.44	1.52	.	.	.
25MAR91:22:15	FTD	1.69	0.00	0.44	256.80	100.00	1.48	1.54	.	.	.
25MAR91:22:30	FTD	1.72	0.00	0.43	281.70	100.00	1.49	1.52	.	.	.
25MAR91:22:45	FTD	1.71	0.00	0.45	237.60	100.00	1.41	1.39	.	.	.
25MAR91:23:00	FTD	1.68	0.00	0.86	208.60	100.00	1.40	1.39	.	.	.
25MAR91:23:15	FTD	1.63	0.00	0.82	215.20	100.00	1.51	1.49	.	.	.
25MAR91:23:30	FTD	1.62	0.00	0.44	217.20	100.00	1.48	1.46	.	.	.
25MAR91:23:45	FTD	1.59	0.00	0.44	211.00	100.00	1.13	1.20	.	.	.
26MAR91:00:00	FTD	1.50	0.00	0.44	214.60	100.00	1.08	1.10	.	.	.
26MAR91:00:15	FTD	1.46	0.00	0.45	199.20	100.00	0.81	1.00	.	.	.
26MAR91:00:30	FTD	1.40	0.00	0.44	201.80	100.00	0.54	0.76	.	.	.

(Continued)

Table B3 (Continued)

DAY AND TIME OF COLLECTION	VISITED SITE	AIR TEMP. (C)	SOLAR RADIATION (W/M**2)	WIND MAGNITUD (M/S)	WIND DIRECTION (DEGREES)	RELATIVE HUMIDITY (PERCENT)	BCKGND GRASS (C)	BCKGND BUSH (C)	BCKGND TREE (C)	BCKGND SOIL (C)	BCKGND ROAD (C)
26MAR91:00:45	FTD	1.33	0.00	0.45	217.20	100.00	0.21	0.58	.	.	.
26MAR91:01:00	FTD	1.18	0.00	0.45	233.60	100.00	0.16	0.51	.	.	.
26MAR91:01:15	FTD	1.10	0.00	0.45	233.00	100.00	0.16	0.53	.	.	.
26MAR91:01:30	FTD	1.21	0.00	0.39	198.30	100.00	0.73	0.89	.	.	.
26MAR91:01:45	FTD	1.38	0.00	0.44	196.20	100.00	1.05	1.22	.	.	.
26MAR91:02:00	FTD	1.43	0.00	0.44	190.90	100.00	1.00	1.20	.	.	.
26MAR91:02:15	FTD	1.39	0.00	0.44	200.50	100.00	0.97	1.07	.	.	.
26MAR91:02:30	FTD	1.37	0.00	0.44	207.60	100.00	0.96	1.00	.	.	.
26MAR91:02:45	FTD	1.33	0.00	0.44	191.30	100.00	0.85	0.99	.	.	.
26MAR91:03:00	FTD	1.30	0.00	0.44	188.40	100.00	0.86	0.97	.	.	.
26MAR91:03:15	FTD	1.27	0.00	0.43	202.20	100.00	0.82	0.88	.	.	.
26MAR91:03:30	FTD	1.25	0.00	0.44	206.40	100.00	0.85	0.89	.	.	.
26MAR91:03:45	FTD	1.22	0.00	0.44	193.90	100.00	0.81	0.86	.	.	.
26MAR91:04:00	FTD	1.22	0.00	0.43	168.50	100.00	0.89	0.89	.	.	.
26MAR91:04:15	FTD	1.22	0.00	0.43	145.30	100.00	0.93	0.85	.	.	.
26MAR91:04:30	FTD	1.18	0.00	0.43	188.60	100.00	0.78	0.75	.	.	.
26MAR91:04:45	FTD	1.12	0.00	0.44	200.20	100.00	0.60	0.62	.	.	.
26MAR91:05:00	FTD	1.11	0.00	0.40	178.20	100.00	0.40	0.46	.	.	.
26MAR91:05:15	FTD	1.05	0.00	0.40	149.30	100.00	0.28	0.41	.	.	.
26MAR91:05:30	FTD	0.90	0.00	0.44	113.20	100.00	0.09	0.15	.	.	.
26MAR91:05:45	FTD	0.76	0.00	0.44	105.70	100.00	0.09	0.09	.	.	.
26MAR91:06:00	FTD	0.69	0.78	0.44	107.00	100.00	0.39	0.20	.	.	.
26MAR91:06:15	FTD	0.75	5.34	0.44	113.90	100.00	0.67	0.48	.	.	.
26MAR91:06:30	FTD	0.80	13.51	0.45	113.90	100.00	0.95	0.52	.	.	.
26MAR91:06:45	FTD	0.89	28.01	0.46	107.40	100.00	1.42	0.88	.	.	.
26MAR91:07:00	FTD	1.06	39.78	0.45	116.30	100.00	1.94	1.21	.	.	.
26MAR91:07:15	FTD	1.26	55.33	0.44	109.00	100.00	2.39	1.55	.	.	.
26MAR91:07:30	FTD	1.50	71.00	0.45	127.60	100.00	2.77	1.77	.	.	.
26MAR91:07:45	FTD	1.76	85.20	1.33	125.40	100.00	3.05	2.00	.	.	.
26MAR91:08:00	FTD	1.99	106.70	1.24	128.10	100.00	3.70	2.39	.	.	.
26MAR91:08:15	FTD	2.28	134.70	1.62	123.00	100.00	4.21	2.87	.	.	.
26MAR91:08:30	FTD	2.65	182.60	1.83	119.90	99.80	5.30	3.47	.	.	.
26MAR91:08:45	FTD	3.01	211.90	2.13	122.80	99.30	6.07	3.99	.	.	.
26MAR91:09:00	FTD	3.38	250.20	2.08	138.60	98.50	6.74	4.57	.	.	.
26MAR91:09:15	FTD	3.89	266.00	1.66	142.40	97.30	7.29	4.99	.	.	.
26MAR91:09:30	FTD	4.49	328.90	1.50	151.20	95.20	8.28	5.73	.	.	.
26MAR91:09:45	FTD	4.74	314.30	1.72	156.80	93.10	8.36	5.84	.	.	.
26MAR91:10:00	FTD	4.89	386.30	1.97	195.20	90.30	9.49	6.41	.	.	.
26MAR91:10:15	FTD	5.35	402.80	1.35	174.00	88.60	10.04	6.92	.	.	.
26MAR91:10:30	FTD	5.30	281.20	1.85	186.80	87.10	8.36	6.10	.	.	.
26MAR91:10:45	FTD	5.15	234.80	2.19	179.10	84.40	7.95	5.84	.	.	.
26MAR91:11:00	FTD	5.42	249.40	1.57	166.80	81.40	8.11	6.02	.	.	.
26MAR91:11:15	FTD	5.30	181.60	2.96	202.60	78.70	6.86	5.28	.	.	.
26MAR91:11:30	FTD	5.25	166.10	2.25	179.60	77.70	6.56	5.42	.	.	.
26MAR91:11:45	FTD	5.44	173.50	0.97	150.50	75.60	6.94	5.79	.	.	.
26MAR91:12:00	FTD	5.75	280.40	2.31	132.90	74.60	8.50	6.75	.	.	.
26MAR91:12:15	FTD	5.77	218.60	2.64	121.90	75.80	7.61	6.39	.	.	.
26MAR91:12:30	FTD	6.19	310.60	2.36	138.50	74.20	9.14	7.31	.	.	.
26MAR91:12:45	FTD	6.35	311.40	3.25	127.30	72.60	8.75	7.36	.	.	.
26MAR91:13:00	FTD	6.30	315.70	4.50	124.30	71.80	8.11	7.06	.	.	.
26MAR91:13:15	FTD	6.73	504.90	4.04	127.70	70.70	10.76	8.90	.	.	.

(Continued)

Table B3 (Continued)

DAY AND TIME OF COLLECTION	VISITED SITE	AIR TEMP. (C)	SOLAR RADIATION (W/M**2)	WIND MAGNITUD (M/S)	WIND DIRECTION (DEGREES)	RELATIVE HUMIDITY (PERCENT)	BCKGND GRASS (C)	BCKGND BUSH (C)	BCKGND TREE (C)	BCKGND SOIL (C)	BCKGND ROAD (C)
26MAR91:13:30	FTD	7.15	561.60	4.35	122.50	67.62	11.32	9.15	.	.	.
26MAR91:13:45	FTD	7.03	521.30	4.69	108.70	67.27	10.11	8.49	.	.	.
26MAR91:14:00	FTD	7.22	541.40	4.62	125.70	66.95	10.46	8.74	.	.	.
26MAR91:14:15	FTD	7.88	591.50	3.98	134.40	65.76	11.56	9.53	.	.	.
26MAR91:14:30	FTD	8.20	589.30	3.99	141.90	64.47	11.60	9.36	.	.	.
26MAR91:14:45	FTD	8.01	464.10	4.28	141.40	64.33	10.39	8.42	.	.	.
26MAR91:15:00	FTD	8.34	546.50	4.77	132.00	63.91	11.18	9.63	.	.	.
26MAR91:15:15	FTD	8.81	514.80	4.21	140.20	63.14	11.51	9.73	.	.	.
26MAR91:15:30	FTD	8.75	406.20	4.33	129.00	62.68	10.29	9.10	.	.	.
26MAR91:15:45	FTD	8.83	381.80	4.25	138.00	62.42	10.54	9.21	.	.	.
26MAR91:16:00	FTD	8.73	329.40	4.91	109.20	62.40	9.93	9.01	.	.	.
26MAR91:16:15	FTD	8.80	264.50	4.58	121.30	62.07	9.23	8.54	.	.	.
26MAR91:16:30	FTD	9.13	215.90	3.41	128.70	61.22	9.10	8.56	.	.	.
26MAR91:16:45	FTD	8.95	171.60	4.25	121.00	61.41	8.28	7.97	.	.	.
26MAR91:17:00	FTD	8.86	126.30	3.50	119.70	61.83	7.96	7.71	.	.	.
26MAR91:17:15	FTD	8.77	87.40	3.73	120.70	61.87	7.24	7.31	.	.	.
26MAR91:17:30	FTD	8.67	62.54	3.28	133.80	62.23	6.88	7.00	.	.	.
26MAR91:17:45	FTD	8.53	40.72	2.87	121.50	62.60	6.44	6.83	.	.	.
26MAR91:18:00	FTD	8.39	23.27	2.57	132.90	62.71	5.54	6.18	.	.	.
26MAR91:18:15	FTD	8.19	7.49	2.33	132.30	62.96	5.38	5.91	.	.	.
26MAR91:18:30	FTD	8.02	0.07	1.93	142.30	63.23	5.16	5.81	.	.	.
26MAR91:18:45	FTD	8.00	0.00	1.67	147.50	63.07	4.76	5.61	.	.	.
26MAR91:19:00	FTD	7.73	0.00	1.33	132.20	63.49	3.92	4.96	.	.	.
26MAR91:19:15	FTD	7.26	0.00	1.49	122.80	64.64	2.81	4.12	.	.	.
26MAR91:19:30	FTD	6.74	0.00	1.76	107.00	66.17	1.90	3.25	.	.	.
26MAR91:19:45	FTD	6.13	0.00	1.71	101.40	68.31	2.37	3.28	.	.	.
26MAR91:20:00	FTD	5.86	0.00	2.10	95.90	70.30	3.50	4.02	.	.	.
26MAR91:20:15	FTD	6.30	0.00	2.90	109.60	70.50	4.63	5.08	.	.	.
26MAR91:20:30	FTD	6.92	0.00	3.32	118.10	69.22	5.38	5.64	.	.	.
26MAR91:20:45	FTD	7.31	0.00	4.60	125.70	68.16	5.92	6.15	.	.	.
26MAR91:21:00	FTD	7.39	0.00	4.85	127.80	67.70	5.51	6.02	.	.	.
26MAR91:21:15	FTD	7.29	0.00	5.37	128.80	67.82	5.26	5.72	.	.	.
26MAR91:21:30	FTD	7.20	0.00	5.43	128.90	68.01	5.46	5.86	.	.	.
26MAR91:21:45	FTD	7.11	0.00	5.42	128.20	68.29	5.53	5.88	.	.	.
26MAR91:22:00	FTD	7.03	0.00	5.39	124.90	68.52	5.51	5.85	.	.	.
26MAR91:22:15	FTD	6.97	0.00	5.46	124.50	68.62	5.48	5.84	.	.	.
26MAR91:22:30	FTD	6.96	0.00	5.61	120.40	68.58	5.46	5.81	.	.	.
26MAR91:22:45	FTD	6.94	0.00	5.78	122.70	68.60	5.48	5.77	.	.	.
26MAR91:23:00	FTD	6.93	0.00	5.63	122.20	68.59	5.54	5.86	.	.	.
26MAR91:23:15	FTD	6.93	0.00	5.55	120.20	68.57	5.67	5.95	.	.	.
26MAR91:23:30	FTD	6.93	0.00	6.04	119.50	68.46	5.57	5.96	.	.	.
26MAR91:23:45	FTD	6.88	0.00	6.03	122.50	68.56	5.53	5.85	.	.	.
27MAR91:00:00	FTD	6.87	0.00	4.87	124.10	68.65	5.57	5.87	.	.	.
27MAR91:00:15	FTD	7.03	0.00	5.64	116.40	68.30	5.67	6.03	.	.	.
27MAR91:00:30	FTD	7.12	0.00	5.91	119.20	68.05	5.59	6.04	.	.	.
27MAR91:00:45	FTD	7.13	0.00	5.67	121.50	67.93	4.96	5.54	.	.	.
27MAR91:01:00	FTD	7.15	0.00	5.62	126.50	67.68	4.68	5.23	.	.	.
27MAR91:01:15	FTD	7.16	0.00	6.04	126.50	67.50	5.06	5.45	.	.	.
27MAR91:01:30	FTD	7.04	0.00	6.10	125.90	67.67	4.93	5.34	.	.	.
27MAR91:01:45	FTD	6.84	0.00	5.70	124.40	68.01	4.16	4.78	.	.	.
27MAR91:02:00	FTD	6.74	0.00	5.30	124.80	68.22	4.10	4.77	.	.	.

(Continued)

Table B3 (Continued)

DAY AND TIME OF COLLECTION	VISITED SITE	AIR TEMP. (C)	SOLAR RADIATION (W/M**2)	WIND MAGNITUD (M/S)	WIND DIRECTION (DEGREES)	RELATIVE HUMIDITY (PERCENT)	BCKGND GRASS (C)	BCKGND BUSH (C)	BCKGND TREE (C)	BCKGND SOIL (C)	BCKGND ROAD (C)
27MAR91:02:15	FTD	6.67	0.00	5.60	125.30	68.24	3.82	4.45	.	.	.
27MAR91:02:30	FTD	6.53	0.00	5.29	125.00	68.61	4.75	5.07	.	.	.
27MAR91:02:45	FTD	6.61	0.00	5.31	121.90	68.79	5.05	5.40	.	.	.
27MAR91:03:00	FTD	6.94	0.00	5.97	126.30	68.25	5.79	6.00	.	.	.
27MAR91:03:15	FTD	7.21	0.00	6.25	125.40	67.43	5.69	6.16	.	.	.
27MAR91:03:30	FTD	6.81	0.00	6.21	126.90	67.75	4.41	5.02	.	.	.
27MAR91:03:45	FTD	6.46	0.00	6.19	127.20	68.21	4.05	4.54	.	.	.
27MAR91:04:00	FTD	6.21	0.00	5.48	135.60	68.88	4.92	5.31	.	.	.
27MAR91:04:15	FTD	6.40	0.00	6.21	128.20	68.83	5.69	5.99	.	.	.
27MAR91:04:30	FTD	6.49	0.00	5.81	128.70	68.86	5.68	6.02	.	.	.
27MAR91:04:45	FTD	6.67	0.00	5.69	132.80	68.96	6.01	6.22	.	.	.
27MAR91:05:00	FTD	7.21	0.00	6.29	131.00	68.45	6.56	6.91	.	.	.
27MAR91:05:15	FTD	7.50	0.00	6.64	133.80	68.01	6.60	7.02	.	.	.
27MAR91:05:30	FTD	7.63	0.00	7.23	136.10	68.00	6.77	7.08	.	.	.
27MAR91:05:45	FTD	7.73	0.00	7.08	133.30	67.96	6.88	7.16	.	.	.
27MAR91:06:00	FTD	7.71	0.00	6.77	131.90	68.11	6.79	7.16	.	.	.
27MAR91:06:15	FTD	7.63	2.47	6.79	130.90	68.42	6.70	7.00	.	.	.
27MAR91:06:30	FTD	7.59	10.55	7.59	123.40	68.70	6.75	7.02	.	.	.
27MAR91:06:45	FTD	7.59	24.98	7.74	129.10	69.09	6.90	7.11	.	.	.
27MAR91:07:00	FTD	7.69	32.08	7.52	138.30	69.32	7.17	7.35	.	.	.
27MAR91:07:15	FTD	7.78	44.84	7.92	128.30	69.76	7.36	7.48	.	.	.
27MAR91:07:30	FTD	.	.	.	.	.	6.59	7.25	.	.	.
10JUL91:11:00	FTD	24.83	962.00	0.45	101.10	52.70	.	.	.	.	.
10JUL91:11:15	FTD	24.66	958.00	0.44	91.00	52.84	.	.	.	.	.
10JUL91:11:30	FTD	24.59	989.00	0.29	136.90	51.27	.	.	.	.	.
10JUL91:11:45	FTD	24.05	1008.00	0.40	20.27	51.68	.	.	.	.	.
10JUL91:12:00	FTD	24.18	1011.00	0.43	310.90	52.09	.	.	.	.	.
10JUL91:12:15	FTD	24.24	1015.00	0.44	262.10	51.53	.	.	.	.	.
10JUL91:12:30	FTD	24.31	1039.00	0.44	227.60	51.85	.	.	.	.	.
10JUL91:12:45	FTD	24.34	1091.00	0.44	204.00	51.82	.	.	.	.	.
10JUL91:13:00	FTD	24.00	976.00	0.44	173.00	52.42	.	.	.	.	.
10JUL91:13:15	FTD	23.99	968.00	0.45	150.40	52.72	.	.	.	.	.
10JUL91:13:30	FTD	24.17	956.00	0.45	136.30	53.98	.	.	.	.	.
10JUL91:13:45	FTD	24.20	941.00	0.45	126.90	52.16	.	.	.	.	.
10JUL91:14:00	FTD	24.24	918.00	0.45	117.80	52.03	25.28	24.02	.	34.32	.
10JUL91:14:15	FTD	24.52	895.00	0.65	123.30	52.29	25.12	23.64	.	33.94	.
10JUL91:14:30	FTD	24.39	863.00	6.46	116.80	51.80	26.23	24.71	.	34.20	.
10JUL91:14:45	FTD	24.08	844.00	6.91	109.30	53.10	24.53	23.80	.	32.91	.
10JUL91:15:00	FTD	23.91	611.50	6.36	108.80	53.20	24.85	24.40	.	33.74	.
10JUL91:15:15	FTD	22.60	409.30	5.23	85.80	53.56	24.97	24.51	.	33.80	.
10JUL91:15:30	FTD	22.49	274.60	4.93	69.94	52.74	23.97	24.00	.	33.28	.
10JUL91:15:45	FTD	.	.	.	.	.	23.72	23.79	.	33.01	.
10JUL91:16:00	FTD	.	.	.	.	.	22.83	22.93	.	31.48	.
10JUL91:16:15	FTD	.	.	.	.	.	19.80	20.70	.	27.68	.
10JUL91:16:30	FTD	.	.	.	.	.	20.43	20.87	.	28.02	.
10JUL91:16:45	FTD	21.81	176.60	4.00	36.82	53.96	19.20	20.05	.	26.05	.
10JUL91:17:00	FTD	21.51	143.80	2.83	14.11	55.48	19.47	20.09	.	25.80	.
10JUL91:17:15	FTD	20.17	56.57	2.18	355.10	70.80	17.95	18.82	.	24.10	.
10JUL91:17:30	FTD	18.13	49.73	0.00	270.00	88.40	15.48	16.47	.	21.02	.
10JUL91:17:45	FTD	17.01	100.20	0.00	270.00	93.80	15.49	15.73	.	20.39	.
10JUL91:18:00	FTD	17.16	140.30	0.00	270.00	95.30	17.24	16.94	.	22.28	.

(Continued)

Table B3 (Continued)

DAY AND TIME OF COLLECTION	VISITED SITE	AIR TEMP. (C)	SOLAR RADIATION (W/M**2)	WIND MAGNITUD (M/S)	WIND DIRECTION (DEGREES)	RELATIVE HUMIDITY (PERCENT)	BCKGND GRASS (C)	BCKGND BUSH (C)	BCKGND TREE (C)	BCKGND SOIL (C)	BCKGND ROAD (C)
10JUL91:18:15	FTD	17.71	205.10	0.00	270.00	94.90	17.86	17.33	.	22.80	.
10JUL91:18:30	FTD	17.73	66.06	0.00	270.00	94.10	16.44	16.62	.	21.42	.
10JUL91:18:45	FTD	17.18	18.70	0.00	270.00	94.40	15.67	16.01	.	20.19	.
10JUL91:19:00	FTD	16.62	37.22	0.00	270.00	95.40	15.75	15.89	.	20.07	.
10JUL91:19:15	FTD	16.55	42.11	0.00	270.00	95.90	15.98	16.04	.	20.48	.
10JUL91:19:30	FTD	16.49	17.68	0.00	270.00	96.00	15.82	15.85	.	20.33	.
10JUL91:19:45	FTD	16.27	9.07	0.00	270.00	96.20	15.59	15.67	.	20.02	.
10JUL91:20:00	FTD	16.12	6.17	0.00	270.00	96.20	15.42	15.45	.	19.60	.
10JUL91:20:15	FTD	15.94	14.04	0.00	270.00	96.30	15.26	15.32	.	19.33	.
10JUL91:20:30	FTD	15.87	13.14	1.27	345.20	96.40	15.14	15.29	.	19.07	.
10JUL91:20:45	FTD	15.72	4.39	1.26	359.00	96.40	14.71	15.06	.	18.80	.
10JUL91:21:00	FTD	15.65	0.21	1.43	10.12	96.40	14.91	15.22	.	18.79	.
10JUL91:21:15	FTD	15.68	0.00	1.62	23.65	96.50	14.95	15.28	.	18.64	.
10JUL91:21:30	FTD	15.62	0.00	2.08	37.62	96.60	14.81	15.14	.	18.26	.
10JUL91:21:45	FTD	15.58	0.00	2.26	56.40	96.70	14.83	15.13	.	18.10	.
10JUL91:22:00	FTD	15.53	0.00	2.07	78.60	96.60	14.72	15.06	.	17.94	.
10JUL91:22:15	FTD	15.38	0.00	1.87	97.90	96.60	14.45	14.88	.	17.75	.
10JUL91:22:30	FTD	15.34	0.00	1.89	114.40	96.70	14.59	14.92	.	17.73	.
10JUL91:22:45	FTD	15.36	0.00	2.02	131.70	96.70	14.52	14.89	.	17.57	.
10JUL91:23:00	FTD	15.23	0.00	1.89	148.10	96.70	14.36	14.70	.	17.40	.
10JUL91:23:15	FTD	15.08	0.00	1.85	165.70	96.70	14.25	14.51	.	17.25	.
10JUL91:23:30	FTD	14.94	0.00	1.76	180.90	96.70	14.02	14.39	.	17.09	.
10JUL91:23:45	FTD	14.87	0.00	1.61	192.60	96.80	14.00	14.30	.	17.02	.
11JUL91:00:00	FTD	14.70	0.00	1.29	204.80	96.80	13.57	14.10	.	16.75	.
11JUL91:00:15	FTD	14.64	0.00	1.18	213.80	96.80	13.54	14.14	.	16.73	.
11JUL91:00:30	FTD	14.54	0.00	1.56	225.60	96.90	13.74	14.05	.	16.73	.
11JUL91:00:45	FTD	14.55	0.00	1.50	234.50	96.90	13.80	14.10	.	16.73	.
11JUL91:01:00	FTD	14.49	0.00	0.95	246.20	97.00	13.34	13.96	.	16.44	.
11JUL91:01:15	FTD	14.23	0.00	1.04	258.60	97.00	12.14	13.36	.	15.65	.
11JUL91:01:30	FTD	13.78	0.00	0.65	262.30	97.10	10.90	12.62	.	15.02	.
11JUL91:01:45	FTD	12.90	0.00	0.47	259.80	97.20	9.83	11.39	.	14.51	.
11JUL91:02:00	FTD	11.93	0.00	0.84	244.60	97.30	9.68	11.05	.	14.41	.
11JUL91:02:15	FTD	11.53	0.00	1.16	226.40	97.40	10.45	11.13	.	14.68	.
11JUL91:02:30	FTD	11.42	0.00	1.05	208.70	97.60	10.20	10.81	.	14.21	.
11JUL91:02:45	FTD	11.43	0.00	1.72	197.80	97.70	10.19	10.75	.	14.06	.
11JUL91:03:00	FTD	11.30	0.00	1.47	197.00	97.80	10.61	10.90	.	14.40	.
11JUL91:03:15	FTD	11.55	0.00	1.60	202.80	97.70	11.23	11.37	.	14.67	.
11JUL91:03:30	FTD	12.16	0.00	1.40	217.00	97.70	11.88	12.08	.	14.99	.
11JUL91:03:45	FTD	12.76	0.00	1.25	241.40	97.70	12.38	12.60	.	15.20	.
11JUL91:04:00	FTD	12.80	0.00	1.56	273.10	97.60	12.21	12.51	.	15.00	.
11JUL91:04:15	FTD	12.94	0.00	1.40	316.20	97.60	12.31	12.66	.	14.93	.
11JUL91:04:30	FTD	12.99	0.00	1.00	344.60	97.60	12.36	12.70	.	14.99	.
11JUL91:04:45	FTD	12.88	0.00	1.56	1.46	97.60	12.21	12.49	.	14.79	.
11JUL91:05:00	FTD	12.79	0.00	1.50	11.91	97.70	12.18	12.41	.	14.79	.
11JUL91:05:15	FTD	12.91	0.00	1.61	22.29	97.60	12.35	12.59	.	14.87	.
11JUL91:05:30	FTD	13.05	1.72	1.52	35.33	97.60	12.38	12.72	.	14.83	.
11JUL91:05:45	FTD	13.19	11.19	1.33	47.18	97.60	12.25	12.70	.	14.59	.
11JUL91:06:00	FTD	12.93	24.58	1.32	56.34	97.60	11.66	12.32	.	14.10	.
11JUL91:06:15	FTD	12.85	28.38	1.19	60.07	97.60	12.27	12.49	.	14.69	.
11JUL91:06:30	FTD	13.31	26.87	0.77	68.00	97.70	13.16	13.24	.	15.34	.
11JUL91:06:45	FTD	13.81	45.06	0.77	81.90	97.50	13.79	13.79	.	15.67	.

(Continued)

Table B3 (Continued)

DAY AND TIME OF COLLECTION	VISITED SITE	AIR TEMP. (C)	SOLAR RADIATION (W/M**2)	WIND MAGNITUD (M/S)	WIND DIRECTION (DEGREES)	RELATIVE HUMIDITY (PERCENT)	BCKGND GRASS (C)	BCKGND BUSH (C)	BCKGND TREE (C)	BCKGND SOIL (C)	BCKGND ROAD (C)
27MAR91:02:15	FTD	6.67	0.00	5.60	125.30	68.24	3.82	4.45	.	.	.
27MAR91:02:30	FTD	6.53	0.00	5.29	125.00	68.61	4.75	5.07	.	.	.
27MAR91:02:45	FTD	6.61	0.00	5.31	121.90	68.79	5.05	5.40	.	.	.
27MAR91:03:00	FTD	6.94	0.00	5.97	126.30	68.25	5.79	6.00	.	.	.
27MAR91:03:15	FTD	7.21	0.00	6.25	125.40	67.43	5.69	6.16	.	.	.
27MAR91:03:30	FTD	6.81	0.00	6.21	126.90	67.75	4.41	5.02	.	.	.
27MAR91:03:45	FTD	6.46	0.00	6.19	127.20	68.21	4.05	4.54	.	.	.
27MAR91:04:00	FTD	6.21	0.00	5.48	135.60	68.88	4.92	5.31	.	.	.
27MAR91:04:15	FTD	6.40	0.00	6.21	128.20	68.83	5.69	5.99	.	.	.
27MAR91:04:30	FTD	6.49	0.00	5.81	128.70	68.86	5.68	6.02	.	.	.
27MAR91:04:45	FTD	6.67	0.00	5.69	132.80	68.96	6.01	6.22	.	.	.
27MAR91:05:00	FTD	7.21	0.00	6.29	131.00	68.45	6.56	6.91	.	.	.
27MAR91:05:15	FTD	7.50	0.00	6.64	133.80	68.01	6.60	7.02	.	.	.
27MAR91:05:30	FTD	7.63	0.00	7.23	136.10	68.00	6.77	7.08	.	.	.
27MAR91:05:45	FTD	7.73	0.00	7.08	133.30	67.96	6.88	7.16	.	.	.
27MAR91:06:00	FTD	7.71	0.00	6.77	131.90	68.11	6.79	7.16	.	.	.
27MAR91:06:15	FTD	7.63	2.47	6.79	130.90	68.42	6.70	7.00	.	.	.
27MAR91:06:30	FTD	7.59	10.55	7.59	123.40	68.70	6.75	7.02	.	.	.
27MAR91:06:45	FTD	7.59	24.98	7.74	129.10	69.09	6.90	7.11	.	.	.
27MAR91:07:00	FTD	7.69	32.08	7.52	138.30	69.32	7.17	7.35	.	.	.
27MAR91:07:15	FTD	7.78	44.84	7.92	128.30	69.76	7.36	7.48	.	.	.
27MAR91:07:30	FTD	.	.	.	.	.	6.59	7.25	.	.	.
10JUL91:11:00	FTD	24.83	962.00	0.45	101.10	52.70	.	.	.	.	.
10JUL91:11:15	FTD	24.66	958.00	0.44	91.00	52.84	.	.	.	.	.
10JUL91:11:30	FTD	24.59	989.00	0.29	136.90	51.27	.	.	.	.	.
10JUL91:11:45	FTD	24.05	1008.00	0.40	20.27	51.68	.	.	.	.	.
10JUL91:12:00	FTD	24.18	1011.00	0.43	310.90	52.09	.	.	.	.	.
10JUL91:12:15	FTD	24.24	1015.00	0.44	262.10	51.53	.	.	.	.	.
10JUL91:12:30	FTD	24.31	1039.00	0.44	227.60	51.85	.	.	.	.	.
10JUL91:12:45	FTD	24.34	1091.00	0.44	204.00	51.82	.	.	.	.	.
10JUL91:13:00	FTD	24.00	976.00	0.44	173.00	52.42	.	.	.	.	.
10JUL91:13:15	FTD	23.99	968.00	0.45	150.40	52.72	.	.	.	.	.
10JUL91:13:30	FTD	24.17	956.00	0.45	136.30	53.98	.	.	.	.	.
10JUL91:13:45	FTD	24.20	941.00	0.45	126.90	52.16	.	.	.	.	.
10JUL91:14:00	FTD	24.24	918.00	0.45	117.80	52.03	25.28	24.02	.	34.32	.
10JUL91:14:15	FTD	24.52	895.00	0.65	123.30	52.29	25.12	23.64	.	33.94	.
10JUL91:14:30	FTD	24.39	863.00	6.46	116.80	51.80	26.23	24.71	.	34.20	.
10JUL91:14:45	FTD	24.08	844.00	6.91	109.30	53.10	24.53	23.80	.	32.91	.
10JUL91:15:00	FTD	23.91	611.50	6.36	108.80	53.20	24.85	24.40	.	33.74	.
10JUL91:15:15	FTD	22.60	409.30	5.23	85.80	53.56	24.97	24.51	.	33.80	.
10JUL91:15:30	FTD	22.49	274.60	4.93	69.94	52.74	23.97	24.00	.	33.28	.
10JUL91:15:45	FTD	.	.	.	.	.	23.72	23.79	.	33.01	.
10JUL91:16:00	FTD	.	.	.	.	.	22.83	22.93	.	31.48	.
10JUL91:16:15	FTD	.	.	.	.	.	19.80	20.70	.	27.68	.
10JUL91:16:30	FTD	.	.	.	.	.	20.43	20.87	.	28.02	.
10JUL91:16:45	FTD	21.81	176.60	4.00	36.82	53.96	19.20	20.05	.	26.05	.
10JUL91:17:00	FTD	21.51	143.80	2.83	14.11	55.48	19.47	20.09	.	25.80	.
10JUL91:17:15	FTD	20.17	56.57	2.18	355.10	70.80	17.95	18.82	.	24.10	.
10JUL91:17:30	FTD	18.13	49.73	0.00	270.00	88.40	15.48	16.47	.	21.02	.
10JUL91:17:45	FTD	17.01	100.20	0.00	270.00	93.80	15.49	15.73	.	20.39	.
10JUL91:18:00	FTD	17.16	140.30	0.00	270.00	95.30	17.24	16.94	.	22.28	.

(Continued)

Table B3 (Continued)

DAY AND TIME OF COLLECTION	VISITED SITE	AIR TEMP. (C)	SOLAR RADIATION (W/M**2)	WIND MAGNITUD (M/S)	WIND DIRECTION (DEGREES)	RELATIVE HUMIDITY (PERCENT)	BCKGND GRASS (C)	BCKGND BUSH (C)	BCKGND TREE (C)	BCKGND SOIL (C)	BCKGND ROAD (C)
11JUL91:07:00	FTD	14.39	71.30	1.06	94.00	97.50	14.49	14.40	.	16.08	.
11JUL91:07:15	FTD	15.04	81.30	0.62	103.40	97.20	15.20	14.99	.	16.46	.
11JUL91:07:30	FTD	15.89	113.50	0.45	104.00	97.00	16.19	15.90	.	16.80	.
11JUL91:07:45	FTD	16.33	117.50	0.67	94.00	96.80	16.17	15.89	.	16.81	.
11JUL91:08:00	FTD	16.84	276.00	1.10	87.10	96.60	17.16	16.45	.	17.45	.
11JUL91:08:15	FTD	18.64	513.10	1.17	76.70	95.60	19.72	18.33	.	19.83	.
11JUL91:08:30	FTD	19.50	377.10	1.71	60.78	94.10	18.81	17.79	.	19.77	.
11JUL91:08:45	FTD	20.10	521.10	0.99	38.04	91.20	20.17	18.52	.	21.01	.
11JUL91:09:00	FTD	20.88	532.00	1.21	17.47	85.00	20.56	18.89	.	21.60	.
11JUL91:09:15	FTD	21.64	611.40	1.32	352.80	79.10	21.42	19.77	.	22.52	.
11JUL91:09:30	FTD	22.17	679.40	1.28	331.10	74.60	21.91	20.37	.	23.70	.
11JUL91:09:45	FTD	22.98	727.00	1.27	315.60	67.54	23.05	21.40	.	25.24	.
11JUL91:10:00	FTD	23.14	736.00	1.62	304.00	67.63	23.03	21.03	.	24.87	.
11JUL91:10:15	FTD	23.18	754.00	1.73	294.80	66.33	23.13	21.81	.	25.31	.
11JUL91:10:30	FTD	23.39	653.60	1.90	286.50	64.90	22.77	21.75	.	25.49	.
11JUL91:10:45	FTD	23.23	701.00	1.80	277.50	64.51	22.44	20.82	.	25.01	.
11JUL91:11:00	FTD	23.30	631.90	1.78	267.00	62.31	22.59	21.76	.	25.37	.
11JUL91:11:15	FTD	23.37	673.50	2.54	257.50	58.43	23.54	21.86	.	26.16	.
11JUL91:11:30	FTD	22.87	853.00	2.61	236.90	59.32	25.09	22.14	.	26.34	.
11JUL91:11:45	FTD	24.10	1030.00	3.17	235.30	53.73	26.07	24.90	.	28.39	.
11JUL91:12:00	FTD	23.33	759.00	3.14	219.20	52.52	23.66	23.08	.	26.39	.
11JUL91:12:15	FTD	24.51	1042.00	2.75	209.20	47.50	26.44	25.53	.	29.55	.
11JUL91:12:30	FTD	25.14	1017.00	2.29	202.90	44.72	26.63	26.11	.	30.59	.
11JUL91:12:45	FTD	25.29	1030.00	2.45	195.60	41.50	26.61	25.88	.	30.92	.
11JUL91:13:00	FTD	24.97	1042.00	2.68	193.90	42.44	26.71	25.74	.	32.07	.
11JUL91:13:15	FTD	24.42	579.10	2.65	184.60	43.55	23.34	23.70	.	28.31	.
11JUL91:13:30	FTD	24.03	923.00	2.17	173.20	46.27	25.09	24.68	.	29.66	.
11JUL91:13:45	FTD	25.41	858.00	2.89	184.30	43.24	26.18	25.84	.	31.91	.
11JUL91:14:00	FTD	21.95	189.70	4.76	155.00	54.82	14.20	16.85	.	21.80	.
11JUL91:14:15	FTD	19.32	985.00	2.29	119.70	79.60	21.19	19.30	.	27.47	.
11JUL91:14:30	FTD	21.38	975.00	2.60	134.00	74.30	24.27	23.30	.	29.83	.
11JUL91:14:45	FTD	22.66	953.00	2.53	151.40	64.74	25.55	25.02	.	30.10	.
11JUL91:15:00	FTD	23.34	926.70	2.23	164.70	59.64	25.50	26.30	.	30.21	.
11JUL91:15:15	FTD	24.12	843.00	2.45	185.70	57.00	26.08	26.71	.	30.47	.
11JUL91:15:30	FTD	24.56	923.00	2.20	200.50	51.58	25.63	27.27	.	29.51	.
11JUL91:15:45	FTD	24.80	362.30	1.23	216.20	49.54	23.16	24.82	.	27.82	.
11JUL91:16:00	FTD	24.21	352.00	1.89	208.00	51.08	22.20	22.64	.	25.82	.
11JUL91:16:15	FTD	23.89	479.70	3.04	193.50	50.43	20.34	21.26	.	24.02	.
11JUL91:16:30	FTD	24.98	807.00	3.55	208.00	47.75	26.37	25.70	.	29.96	.
11JUL91:16:45	FTD	25.21	687.90	3.53	215.70	47.07	25.09	26.20	.	30.25	.
11JUL91:17:00	FTD	25.27	643.10	3.43	223.30	47.54	24.30	25.24	.	29.94	.
11JUL91:17:15	FTD	25.13	585.30	3.54	230.60	47.82	23.84	24.84	.	29.69	.
11JUL91:17:30	FTD	24.85	536.90	3.92	232.60	44.30	22.72	24.04	.	29.00	.
11JUL91:17:45	FTD	24.57	483.50	3.57	228.80	46.00	22.96	23.65	.	29.08	.
11JUL91:18:00	FTD	24.39	421.20	3.11	227.90	49.02	22.67	23.79	.	29.17	.
11JUL91:18:15	FTD	24.26	392.20	3.10	228.20	50.35	22.63	23.31	.	29.00	.
11JUL91:18:30	FTD	23.95	341.20	3.44	225.50	51.25	22.09	22.53	.	28.02	.
11JUL91:18:45	FTD	23.25	290.00	4.56	213.80	55.13	20.69	21.31	.	26.21	.
11JUL91:19:00	FTD	22.31	241.90	5.16	192.00	55.81	19.78	20.09	.	25.23	.
11JUL91:19:15	FTD	21.82	194.80	4.80	169.60	57.04	19.50	19.83	.	24.12	.
11JUL91:19:30	FTD	21.43	152.00	4.29	145.20	57.43	18.78	19.59	.	23.08	.

(Continued)

Table B4
Scene Content Reports for Fort Drum; Angular Scale of Photos Interpreted Equals 0.49 deg/in.

Scene #1 - March TOTAL AREA: 27.2781 SQ IN.

RECORD NUMBER	AREA OR OBJECT	CHARACTERISTIC	COLOR	POLYGON AREA (SQ IN.)	PERCENTAGE OF AREA	POLYGON PERIMETER (INCHES)
2	Sky	None	Gray	5.9015	21.63	12.7263
3	Trees	Leaves Off	Brown	2.4739	9.07	11.7381
4	Grass	Short Field	Tan	6.6395	24.34	21.8112
5	Grass	Bushy Area	Brown	0.0590	0.22	2.0584
6	Man-Made	Sign	White	0.0050	0.02	0.3031
7	Grass	Bushy Area	Brown	0.2885	1.06	5.9903
8	Grass	Bushy Area	Brown	10.4813	38.42	19.8607
9	Grass	Short Field	Tan	0.7187	2.63	5.7902
10	Grass	Short Field	Tan	0.7108	2.61	6.0166

NUMBER OF POLYGONS: 9

DIFFERENT TYPES OF OBJECTS: 4

PERCENTAGE OF AREA FOR TYPE Man-Made IS 0.02%
PERCENTAGE OF AREA FOR TYPE Grass IS 69.28%
PERCENTAGE OF AREA FOR TYPE Trees IS 9.07%
PERCENTAGE OF AREA FOR TYPE Road IS 0.00%
PERCENTAGE OF AREA FOR TYPE Water IS 0.00%
PERCENTAGE OF AREA FOR TYPE Sky IS 21.63%
PERCENTAGE OF AREA FOR TYPE Soil IS 0.00%
PERCENTAGE OF AREA FOR TYPE Mountain IS 0.00%

TOTAL EDGE LENGTH: 32.7003 IN.

LINEAR EDGES BETWEEN TYPES (INCHES)

	Man-Made	Grass	Trees	Road	Water	Sky	Soil	Mountain
Man-Made	0.0000	0.3031	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Grass	0.3031	21.7032	5.3413	0.0000	0.0000	0.0000	0.0000	0.0000
Trees	0.0000	5.3413	0.0000	0.0000	0.0000	5.3527	0.0000	0.0000
Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Sky	0.0000	0.0000	5.3527	0.0000	0.0000	0.0000	0.0000	0.0000
Soil	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mountain	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

NUMBER OF VEHICLES: 0

GREEN VEGETATION PRESENT: NO

(Continued)

Table B4 (Continued)

Scene #2 - March TOTAL AREA: 27.4352 SQ IN.

RECORD NUMBER	AREA OR OBJECT	CHARACTERISTIC	COLOR	POLYGON AREA (SQ IN.)	PERCENTAGE OF AREA	POLYGON PERIMETER (INCHES)
2	Sky	None	Gray	5.7273	20.88	12.6451
3	Trees	Leaves Off	Brown	2.3479	8.56	11.6096
4	Grass	Short Field	Tan	13.0196	47.46	63.3416
5	Grass	Bushy Area	Brown	0.2186	0.80	5.3700
6	Grass	Bushy Area	Brown	0.3437	1.25	5.8215
7	Grass	Bushy Area	Brown	0.1372	0.50	2.5981
8	Man-Made	Sign	White	0.0055	0.02	0.2981
9	Grass	Bushy Area	Brown	0.3746	1.37	5.3950
10	Grass	Bushy Area	Brown	0.1003	0.37	2.3225
11	Grass	Bushy Area	Brown	0.2575	0.94	3.5602
12	Grass	Bushy Area	Brown	0.1056	0.39	1.8391
13	Grass	Bushy Area	Brown	0.9488	3.46	9.7794
14	Grass	Bushy Area	Brown	1.2471	4.55	5.4668
15	Grass	Bushy Area	Brown	1.0642	3.88	9.2925
16	Grass	Bushy Area	Brown	1.5373	5.60	6.6783

NUMBER OF POLYGONS: 15

DIFFERENT TYPES OF OBJECTS: 4

PERCENTAGE OF AREA FOR TYPE Man-Made IS 0.02%
PERCENTAGE OF AREA FOR TYPE Grass IS 70.55%
PERCENTAGE OF AREA FOR TYPE Trees IS 8.56%
PERCENTAGE OF AREA FOR TYPE Road IS 0.00%
PERCENTAGE OF AREA FOR TYPE Water IS 0.00%
PERCENTAGE OF AREA FOR TYPE Sky IS 20.88%
PERCENTAGE OF AREA FOR TYPE Soil IS 0.00%
PERCENTAGE OF AREA FOR TYPE Mountain IS 0.00%

TOTAL EDGE LENGTH: 62.5324 IN.

LINEAR EDGES BETWEEN TYPES (INCHES)

	Man-Made	Grass	Trees	Road	Water	Sky	Soil	Mountain
Man-Made	0.0000	0.2981	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Grass	0.2981	51.5950	5.2986	0.0000	0.0000	0.0000	0.0000	0.0000
Trees	0.0000	5.2986	0.0000	0.0000	0.0000	5.3407	0.0000	0.0000
Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Sky	0.0000	0.0000	5.3407	0.0000	0.0000	0.0000	0.0000	0.0000
Soil	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mountain	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

NUMBER OF VEHICLES: 0

GREEN VEGETATION PRESENT: NO

(Continued) (Sheet 2 of 14)

Table B4 (Continued)

Scene #3 - March TOTAL AREA: 27.3498 SQ IN.

RECORD NUMBER	AREA OR OBJECT	CHARACTERISTIC	COLOR	POLYGON AREA (SQ IN.)	PERCENTAGE OF AREA	POLYGON PERIMETER (INCHES)
2	Sky	None	Gray	5.6097	20.51	13.9467
3	Trees	Leaves Off	Brown	2.1870	8.00	12.8790
4	Grass	Short Field	Tan	1.1272	4.12	11.0949
5	Grass	Bushy Area	Brown	0.6988	2.56	10.8025
6	Grass	Short Field	Tan	1.8386	6.72	11.3801
7	Grass	Bushy Area	Brown	1.6045	5.87	21.7490
8	Grass	Short Field	Tan	0.5559	2.03	10.4115
9	Grass	Short Field	Tan	0.6329	2.31	10.8611
10	Grass	Bushy Area	Brown	0.9129	3.34	10.6029
11	Grass	Short Field	Tan	3.3387	12.21	12.1480
12	Grass	Bushy Area	Brown	8.8436	32.34	14.4446

NUMBER OF POLYGONS: 11

DIFFERENT TYPES OF OBJECTS: 3

PERCENTAGE OF AREA FOR TYPE Man-Made IS 0.00%
PERCENTAGE OF AREA FOR TYPE Grass IS 71.49%
PERCENTAGE OF AREA FOR TYPE Trees IS 8.00%
PERCENTAGE OF AREA FOR TYPE Road IS 0.00%
PERCENTAGE OF AREA FOR TYPE Water IS 0.00%
PERCENTAGE OF AREA FOR TYPE Sky IS 20.51%
PERCENTAGE OF AREA FOR TYPE Soil IS 0.00%
PERCENTAGE OF AREA FOR TYPE Mountain IS 0.00%

TOTAL EDGE LENGTH: 59.6997 IN.

LINEAR EDGES BETWEEN TYPES (INCHES)

	Man-Made	Grass	Trees	Road	Water	Sky	Soil	Mountain
Man-Made	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Grass	0.0000	47.6887	5.4077	0.0000	0.0000	0.0000	0.0000	0.0000
Trees	0.0000	5.4077	0.0000	0.0000	0.0000	6.6033	0.0000	0.0000
Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Sky	0.0000	0.0000	6.6033	0.0000	0.0000	0.0000	0.0000	0.0000
Soil	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mountain	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

NUMBER OF VEHICLES: 0

GREEN VEGETATION PRESENT: NO

(Continued)

Table B4 (Continued)

Scene #4 - March TOTAL AREA: 27.3401 SQ IN.

RECORD NUMBER	AREA OR OBJECT	CHARACTERISTIC	COLOR	POLYGON AREA (SQ IN.)	PERCENTAGE OF AREA	POLYGON PERIMETER (INCHES)
2	Sky	None	Gray	5.8874	21.53	14.2034
3	Trees	Leaves Off	Brown	4.7356	17.32	21.0059
4	Grass	Short Field	Tan	2.6534	9.71	15.8283
5	Grass	Bushy Area	Brown	0.1866	0.68	3.3190
6	Grass	Bushy Area	Brown	1.2074	4.42	10.3294
7	Grass	Short Field	Tan	1.8224	6.67	18.6118
8	Grass	Bushy Area	Brown	10.5377	38.54	20.4827
9	Grass	Bushy Area	Brown	0.3097	1.13	3.7647

NUMBER OF POLYGONS: 8

DIFFERENT TYPES OF OBJECTS: 3

PERCENTAGE OF AREA FOR TYPE Man-Made IS 0.00%
PERCENTAGE OF AREA FOR TYPE Grass IS 61.15%
PERCENTAGE OF AREA FOR TYPE Trees IS 17.32%
PERCENTAGE OF AREA FOR TYPE Road IS 0.00%
PERCENTAGE OF AREA FOR TYPE Water IS 0.00%
PERCENTAGE OF AREA FOR TYPE Sky IS 21.53%
PERCENTAGE OF AREA FOR TYPE Soil IS 0.00%
PERCENTAGE OF AREA FOR TYPE Mountain IS 0.00%

TOTAL EDGE LENGTH: 43.3144 IN.

LINEAR EDGES BETWEEN TYPES (INCHES)

	Man-Made	Grass	Trees	Road	Water	Sky	Soil	Mountain
Man-Made	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Grass	0.0000	26.4181	9.1850	0.0000	0.0000	0.0000	0.0000	0.0000
Trees	0.0000	9.1850	0.0000	0.0000	0.0000	7.7113	0.0000	0.0000
Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Sky	0.0000	0.0000	7.7113	0.0000	0.0000	0.0000	0.0000	0.0000
Soil	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mountain	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

NUMBER OF VEHICLES: 0

GREEN VEGETATION PRESENT: NO

(Continued)

Table B4 (Continued)

Scene #5 - March TOTAL AREA: 27.3438 SQ IN.

RECORD NUMBER	AREA OR OBJECT	CHARACTERISTIC	COLOR	POLYGON AREA (SQ IN.)	PERCENTAGE OF AREA	POLYGON PERIMETER (INCHES)
2	Sky	None	Gray	5.1160	18.71	13.2898
3	Trees	Leaves Off	Brown	1.7355	6.35	10.3328
4	Trees	Leaves Off	Brown	1.2534	4.58	10.9595
5	Grass	Short Field	Tan	3.7588	13.75	12.3195
6	Grass	Bushy Area	Brown	0.8200	3.00	10.6996
7	Grass	Short Field	Tan	2.0596	7.53	10.9853
8	Grass	Bushy Area	Brown	11.4408	41.84	26.9185
9	Grass	Short Field	Tan	0.3299	1.21	3.5410
10	Grass	Short Field	Tan	0.1277	0.47	2.1327
11	Grass	Short Field	Tan	0.7022	2.57	7.1884

NUMBER OF POLYGONS: 10

DIFFERENT TYPES OF OBJECTS: 3

PERCENTAGE OF AREA FOR TYPE Man-Made IS 0.00%
PERCENTAGE OF AREA FOR TYPE Grass IS 70.36%
PERCENTAGE OF AREA FOR TYPE Trees IS 10.93%
PERCENTAGE OF AREA FOR TYPE Road IS 0.00%
PERCENTAGE OF AREA FOR TYPE Water IS 0.00%
PERCENTAGE OF AREA FOR TYPE Sky IS 18.71%
PERCENTAGE OF AREA FOR TYPE Soil IS 0.00%
PERCENTAGE OF AREA FOR TYPE Mountain IS 0.00%

TOTAL EDGE LENGTH: 43.7242 IN.

LINEAR EDGES BETWEEN TYPES (INCHES)

	Man-Made	Grass	Trees	Road	Water	Sky	Soil	Mountain
Man-Made	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Grass	0.0000	27.3449	8.3258	0.0000	0.0000	0.0000	0.0000	0.0000
Trees	0.0000	8.3258	0.3665	0.0000	0.0000	7.6869	0.0000	0.0000
Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Sky	0.0000	0.0000	7.6869	0.0000	0.0000	0.0000	0.0000	0.0000
Soil	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mountain	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

NUMBER OF VEHICLES: 0

GREEN VEGETATION PRESENT: NO

(Continued)

Table J4 (Continued)

Scene #6 - March TOTAL AREA: 27.2244 SQ IN.

RECORD NUMBER	AREA OR OBJECT	CHARACTERISTIC	COLOR	POLYGON AREA (SQ IN.)	PERCENTAGE OF AREA	POLYGON PERIMETER (INCHES)
2	Sky	None	Gray	5.7703	21.20	13.4497
3	Trees	Leaves Off	Brown	1.6404	6.03	12.2608
4	Grass	Short Field	Tan	0.1562	0.57	1.9414
5	Grass	Short Field	Tan	4.1239	15.15	34.1564
6	Grass	Bushy Area	Brown	0.8197	3.01	10.9463
7	Grass	Bushy Area	Brown	0.1723	0.63	2.5800
8	Grass	Bushy Area	Brown	0.5267	1.93	6.6386
9	Grass	Bushy Area	Brown	11.0558	40.61	29.2051
10	Grass	Short Field	Tan	2.9590	10.87	10.9970

NUMBER OF POLYGONS: 9

DIFFERENT TYPES OF OBJECTS: 3

PERCENTAGE OF AREA FOR TYPE Man-Made IS 0.00%
PERCENTAGE OF AREA FOR TYPE Grass IS 72.78%
PERCENTAGE OF AREA FOR TYPE Trees IS 6.03%
PERCENTAGE OF AREA FOR TYPE Road IS 0.00%
PERCENTAGE OF AREA FOR TYPE Water IS 0.00%
PERCENTAGE OF AREA FOR TYPE Sky IS 21.20%
PERCENTAGE OF AREA FOR TYPE Soil IS 0.00%
PERCENTAGE OF AREA FOR TYPE Mountain IS 0.00%

TOTAL EDGE LENGTH: 50.6511 IN.

LINEAR EDGES BETWEEN TYPES (INCHES)

	Man-Made	Grass	Trees	Road	Water	Sky	Soil	Mountain
Man-Made	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Grass	0.0000	39.0341	5.4110	0.0000	0.0000	0.0000	0.0000	0.0000
Trees	0.0000	5.4110	0.0000	0.0000	0.0000	6.2061	0.0000	0.0000
Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Sky	0.0000	0.0000	6.2061	0.0000	0.0000	0.0000	0.0000	0.0000
Soil	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mountain	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

NUMBER OF VEHICLES: 0

GREEN VEGETATION PRESENT: NO

(Continued)

Table B4 (Continued)

Scene #7 - March TOTAL AREA: 27.2355 SQ IN.

RECORD NUMBER	AREA OR OBJECT	CHARACTERISTIC	COLOR	POLYGON AREA (SQ IN.)	PERCENTAGE OF AREA	POLYGON PERIMETER (INCHES)
2	Sky	None	Gray	5.2802	19.39	13.3369
3	Trees	Leaves Off	Brown	1.8634	6.84	12.4361
4	Grass	Short Field	Tan	0.5268	1.93	5.3030
5	Grass	Bushy Area	Brown	2.0672	7.59	12.2099
6	Grass	Short Field	Tan	1.0336	3.80	12.0826
7	Grass	Bushy Area	Brown	6.5251	23.95	17.3584
8	Grass	Short Field	Tan	0.2394	0.88	4.2810
9	Grass	Short Field	Tan	3.6285	13.32	18.0997
10	Grass	Bushy Area	Brown	2.9093	10.68	7.3937
11	Grass	Bushy Are	Brown	3.1639	11.62	8.7573

NUMBER OF POLYGONS: 10

DIFFERENT TYPES OF OBJECTS: 3

PERCENTAGE OF AREA FOR TYPE Man-Made IS 0.00%
PERCENTAGE OF AREA FOR TYPE Grass IS 73.77%
PERCENTAGE OF AREA FOR TYPE Trees IS 6.84%
PERCENTAGE OF AREA FOR TYPE Road IS 0.00%
PERCENTAGE OF AREA FOR TYPE Water IS 0.00%
PERCENTAGE OF AREA FOR TYPE Sky IS 19.39%
PERCENTAGE OF AREA FOR TYPE Soil IS 0.00%
PERCENTAGE OF AREA FOR TYPE Mountain IS 0.00%

TOTAL EDGE LENGTH: 45.1907 IN.

LINEAR EDGES BETWEEN TYPES (INCHES)

	Man-Made	Grass	Trees	Road	Water	Sky	Soil	Mountain
Man-Made	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Grass	0.0000	33.6910	5.2195	0.0000	0.0000	0.0000	0.0000	0.0000
Trees	0.0000	5.2195	0.0000	0.0000	0.0000	6.2803	0.0000	0.0000
Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Sky	0.0000	0.0000	6.2803	0.0000	0.0000	0.0000	0.0000	0.0000
Soil	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mountain	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

NUMBER OF VEHICLES: 0

GREEN VEGETATION PRESENT: NO

(Continued)

Table B4 (Continued)

Scene #8 - March TOTAL AREA: 27.2711 SQ IN.

RECORD NUMBER	AREA OR OBJECT	CHARACTERISTIC	COLOR	POLYGON AREA (SQ IN.)	PERCENTAGE OF AREA	POLYGON PERIMETER (INCHES)
2	Sky	None	Gray	4.9688	18.22	15.7434
3	Trees	Leaves Off	Brown	2.9811	10.93	17.9334
4	Grass	Short Field	Tan	0.1752	0.64	2.8420
5	Grass	Bushy Area	Brown	1.1705	4.29	6.6772
6	Grass	Short Field	Tan	0.1154	0.42	1.4343
7	Grass	Bushy Area	Brown	3.9560	14.51	15.4171
8	Grass	Short Field	Tan	0.2299	0.84	4.7970
9	Grass	Short Field	Tan	0.1438	0.53	2.2858
10	Grass	Short Field	Tan	0.7644	2.80	11.1546
11	Grass	Bushy Area	Brown	10.3200	37.84	18.0876
12	Grass	Short Field	Tan	0.1888	0.69	3.8595
13	Grass	Short Field	Tan	2.2572	8.28	11.4493

NUMBER OF POLYGONS: 12

DIFFERENT TYPES OF OBJECTS: 3

PERCENTAGE OF AREA FOR TYPE Man-Made IS 0.00%
PERCENTAGE OF AREA FOR TYPE Grass IS 70.85%
PERCENTAGE OF AREA FOR TYPE Trees IS 10.93%
PERCENTAGE OF AREA FOR TYPE Road IS 0.00%
PERCENTAGE OF AREA FOR TYPE Water IS 0.00%
PERCENTAGE OF AREA FOR TYPE Sky IS 18.22%
PERCENTAGE OF AREA FOR TYPE Soil IS 0.00%
PERCENTAGE OF AREA FOR TYPE Mountain IS 0.00%

TOTAL EDGE LENGTH: 45.3960 IN.

LINEAR EDGES BETWEEN TYPES (INCHES)

	Man-Made	Grass	Trees	Road	Water	Sky	Soil	Mountain
Man-Made	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Grass	0.0000	28.3136	8.2011	0.0000	0.0000	0.0000	0.0000	0.0000
Trees	0.0000	8.2011	0.0000	0.0000	0.0000	8.8813	0.0000	0.0000
Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Sky	0.0000	0.0000	8.8813	0.0000	0.0000	0.0000	0.0000	0.0000
Soil	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mountain	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

NUMBER OF VEHICLES: 0

GREEN VEGETATION PRESENT: NO

(Continued)

Table B4 (Continued)

Scene #9 - March TOTAL AREA: 27.4049 SQ IN.

RECORD NUMBER	AREA OR OBJECT	CHARACTERISTIC	COLOR	POLYGON AREA (SQ IN.)	PERCENTAGE OF AREA	POLYGON PERIMETER (INCHES)
2	Sky	None	Gray	1.4891	5.43	13.4329
3	Trees	Leaves Off	Brown	6.7144	24.50	18.6741
4	Grass	Bushy Area	Brown	14.3661	52.42	29.0676
5	Grass	Short Field	Tan	0.2574	0.94	2.4870
6	Grass	Short Field	Tan	0.1427	0.52	2.2931
7	Grass	Bushy Area	Brown	0.001	0.00	0.1512
8	Grass	Short Field	Tan	0.1223	0.45	1.6192
9	Grass	Short Field	Tan	1.2004	4.38	6.3466
10	Grass	Short Field	Tan	3.1116	11.35	11.8946

NUMBER OF POLYGONS: 9

DIFFERENT TYPES OF OBJECTS: 3

PERCENTAGE OF AREA FOR TYPE Man-Made IS 0.00%
PERCENTAGE OF AREA FOR TYPE Grass IS 70.07%
PERCENTAGE OF AREA FOR TYPE Trees IS 24.50%
PERCENTAGE OF AREA FOR TYPE Road IS 0.00%
PERCENTAGE OF AREA FOR TYPE Water IS 0.00%
PERCENTAGE OF AREA FOR TYPE Sky IS 5.43%
PERCENTAGE OF AREA FOR TYPE Soil IS 0.00%
PERCENTAGE OF AREA FOR TYPE Mountain IS 0.00%

TOTAL EDGE LENGTH: 32.5120 IN.

LINEAR EDGES BETWEEN TYPES (INCHES)

	Man-Made	Grass	Trees	Road	Water	Sky	Soil	Mountain
Man-Made	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Grass	0.0000	16.1445	8.9657	0.0000	0.0000	0.0000	0.0000	0.0000
Trees	0.0000	8.9657	0.0000	0.0000	0.0000	7.4019	0.0000	0.0000
Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Sky	0.0000	0.0000	7.4019	0.0000	0.0000	0.0000	0.0000	0.0000
Soil	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mountain	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

NUMBER OF VEHICLES: 0

GREEN VEGETATION PRESENT: NO

(Continued)

Table B4 (Continued)

Scene #10 - March TOTAL AREA: 27.2911 SQ IN.

RECORD NUMBER	AREA OR OBJECT	CHARACTERISTIC	COLOR	POLYGON AREA (SQ IN.)	PERCENTAGE OF AREA	POLYGON PERIMETER (INCHES)
2	Trees	Leaves Off	Brown	6.7174	24.61	16.3154
3	Sky	None	Gray	1.0715	3.93	12.0603
4	Grass	Bushy Area	Brown	17.0723	62.56	28.7840
5	Grass	Short Field	Tan	0.2395	0.88	4.6678
6	Grass	Short Field	Tan	0.3162	1.16	6.2942
7	Grass	Short Field	Tan	1.8743	6.87	8.9853

NUMBER OF POLYGONS: 6

DIFFERENT TYPES OF OBJECTS: 3

PERCENTAGE OF AREA FOR TYPE Man-Made IS 0.00%
PERCENTAGE OF AREA FOR TYPE Grass IS 71.46%
PERCENTAGE OF AREA FOR TYPE Trees IS 24.61%
PERCENTAGE OF AREA FOR TYPE Road IS 0.00%
PERCENTAGE OF AREA FOR TYPE Water IS 0.00%
PERCENTAGE OF AREA FOR TYPE Sky IS 3.93%
PERCENTAGE OF AREA FOR TYPE Soil IS 0.00%
PERCENTAGE OF AREA FOR TYPE Mountain IS 0.00%

TOTAL EDGE LENGTH: 28.1051 IN.

LINEAR EDGES BETWEEN TYPES (INCHES)

	Man-Made	Grass	Trees	Road	Water	Sky	Soil	Mountain
Man-Made	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Grass	0.0000	15.3284	5.8252	0.0000	0.0000	0.0000	0.0000	0.0000
Trees	0.0000	5.8252	0.0000	0.0000	0.0000	6.9515	0.0000	0.0000
Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Sky	0.0000	0.0000	6.9515	0.0000	0.0000	0.0000	0.0000	0.0000
Soil	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mountain	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

NUMBER OF VEHICLES: 0

GREEN VEGETATION PRESENT: NO

(Continued)

Table B4 (Continued)

Scene #11 - March TOTAL AREA: 27.2693 SQ IN.

RECORD NUMBER	AREA OR OBJECT	CHARACTERISTIC	COLOR	POLYGON AREA (SQ IN.)	PERCENTAGE OF AREA	POLYGON PERIMETER (INCHES)
2	Sky	None	Gray	0.7471	2.74	11.2169
3	Trees	Leaves Off	Brown	7.5084	27.53	15.4113
4	Grass	Bushy Area	Brown	1.0602	3.89	6.1753
5	Grass	Bushy Area	Brown	0.8892	3.26	5.7109
6	Grass	Short Field	Tan	0.3870	1.42	5.6097
7	Grass	Short Field	Tan	0.3547	1.30	5.2741
8	Grass	Bushy Area	Brown	15.4763	56.75	21.1332
9	Grass	Short Field	Tan	0.8463	3.10	5.4098

NUMBER OF POLYGONS: 8

DIFFERENT TYPES OF OBJECTS: 3

PERCENTAGE OF AREA FOR TYPE Man-Made IS 0.00%
PERCENTAGE OF AREA FOR TYPE Grass IS 69.73%
PERCENTAGE OF AREA FOR TYPE Trees IS 27.53%
PERCENTAGE OF AREA FOR TYPE Road IS 0.00%
PERCENTAGE OF AREA FOR TYPE Water IS 0.00%
PERCENTAGE OF AREA FOR TYPE Sky IS 2.74%
PERCENTAGE OF AREA FOR TYPE Soil IS 0.00%
PERCENTAGE OF AREA FOR TYPE Mountain IS 0.00%

TOTAL EDGE LENGTH: 27.5256 IN.

LINEAR EDGES BETWEEN TYPES (INCHES)

	Man-Made	Grass	Trees	Road	Water	Sky	Soil	Mountain
Man-Made	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Grass	0.0000	15.1996	6.3785	0.0000	0.0000	0.0000	0.0000	0.0000
Trees	0.0000	6.3785	0.0000	0.0000	0.0000	5.9474	0.0000	0.0000
Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Sky	0.0000	0.0000	5.9474	0.0000	0.0000	0.0000	0.0000	0.0000
Soil	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mountain	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

NUMBER OF VEHICLES: 0

GREEN VEGETATION PRESENT: NO

(Continued)

Table B4 (Continued)

Scene #12 - March TOTAL AREA: 27.2820 SQ IN.

RECORD NUMBER	AREA OR OBJECT	CHARACTERISTIC	COLOR	POLYGON AREA (SQ IN.)	PERCENTAGE OF AREA	POLYGON PERIMETER (INCHES)
2	Trees	Leaves Off	Brown	6.9819	25.59	15.9581
3	Sky	None	Gray	0.8404	3.08	10.0778
4	Grass	Bushy Area	Brown	18.2486	66.89	32.1923
5	Grass	Short Field	Tan	0.0700	0.26	1.4125
6	Grass	Short Field	Tan	0.5223	1.91	6.0973
7	Grass	Short Field	Tan	0.1999	0.73	3.8853
8	Grass	Short Field	Tan	0.4188	1.54	3.4553

NUMBER OF POLYGONS: 7

DIFFERENT TYPES OF OBJECTS: 3

PERCENTAGE OF AREA FOR TYPE Man-Made IS 0.00%
PERCENTAGE OF AREA FOR TYPE Grass IS 71.33%
PERCENTAGE OF AREA FOR TYPE Trees IS 25.59%
PERCENTAGE OF AREA FOR TYPE Road IS 0.00%
PERCENTAGE OF AREA FOR TYPE Water IS 0.00%
PERCENTAGE OF AREA FOR TYPE Sky IS 3.08%
PERCENTAGE OF AREA FOR TYPE Soil IS 0.00%
PERCENTAGE OF AREA FOR TYPE Mountain IS 0.00%

TOTAL EDGE LENGTH: 26.0918 IN.

LINEAR EDGES BETWEEN TYPES (INCHES)

	Man-Made	Grass	Trees	Road	Water	Sky	Soil	Mountain
Man-Made	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Grass	0.0000	13.7738	7.1058	0.0000	0.0000	0.0000	0.0000	0.0000
Trees	0.0000	7.1058	0.0000	0.0000	0.0000	5.2122	0.0000	0.0000
Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Sky	0.0000	0.0000	5.2122	0.0000	0.0000	0.0000	0.0000	0.0000
Soil	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mountain	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

NUMBER OF VEHICLES: 0

GREEN VEGETATION PRESENT: NO

(Continued)

Table B4 (Continued)

Scene #13 - March TOTAL AREA: 27.2995 SQ IN.

RECORD NUMBER	AREA OR OBJECT	CHARACTERISTIC	COLOR	POLYGON AREA (SQ IN.)	PERCENTAGE OF AREA	POLYGON PERIMETER (INCHES)
2	Sky	None	Gray	0.2116	0.78	5.0011
3	Trees	Leaves Off	Brown	8.0090	29.34	15.1962
4	Grass	Short Field	Tan	0.0595	0.22	0.9955
5	Grass	Bushy Area	Brown	17.2884	63.33	32.0266
6	Grass	Short Field	Tan	0.0450	0.16	1.2612
7	Grass	Short Field	Tan	0.0740	0.27	2.0132
8	Grass	Short Field	Tan	0.5775	2.12	5.4815
9	Grass	Short Field	Tan	0.3647	1.34	4.8341
10	Grass	Short Field	Tan	0.6698	2.45	4.4476

NUMBER OF POLYGONS: 9

DIFFERENT TYPES OF OBJECTS: 3

PERCENTAGE OF AREA FOR TYPE Man-Made IS 0.00%
PERCENTAGE OF AREA FOR TYPE Grass IS 69.89%
PERCENTAGE OF AREA FOR TYPE Trees IS 29.34%
PERCENTAGE OF AREA FOR TYPE Road IS 0.00%
PERCENTAGE OF AREA FOR TYPE Water IS 0.00%
PERCENTAGE OF AREA FOR TYPE Sky IS 0.78%
PERCENTAGE OF AREA FOR TYPE Soil IS 0.00%
PERCENTAGE OF AREA FOR TYPE Mountain IS 0.00%

TOTAL EDGE LENGTH: 25.1774 IN.

LINEAR EDGES BETWEEN TYPES (INCHES)

	Man-Made	Grass	Trees	Road	Water	Sky	Soil	Mountain
Man-Made	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Grass	0.0000	16.1137	6.5210	0.0000	0.0000	0.0000	0.0000	0.0000
Trees	0.0000	6.5210	0.0000	0.0000	0.0000	2.5427	0.0000	0.0000
Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Sky	0.0000	0.0000	2.5427	0.0000	0.0000	0.0000	0.0000	0.0000
Soil	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mountain	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

NUMBER OF VEHICLES: 0

GREEN VEGETATION PRESENT: NO

(Continued)

Table B4 (Concluded)

Scene #14 - March TOTAL AREA: 27.3238 SQ IN.

RECORD NUMBER	AREA OR OBJECT	CHARACTERISTIC	COLOR	POLYGON AREA (SQ IN.)	PERCENTAGE OF AREA	POLYGON PERIMETER (INCHES)
2	Sky	None	Gray	0.1111	0.41	2.8909
3	Trees	Leaves Off	Brown	8.8077	32.23	14.5417
4	Grass	Bushy Area	Brown	17.1685	62.83	27.5535
5	Grass	Short Field	Tan	0.2984	1.09	4.1894
6	Grass	Short Field	Tan	0.2661	0.97	4.6900
7	Grass	Short Field	Tan	0.6720	2.46	7.2779

NUMBER OF POLYGONS: 6

DIFFERENT TYPES OF OBJECTS: 3

PERCENTAGE OF AREA FOR TYPE Man-Made IS 0.00%
PERCENTAGE OF AREA FOR TYPE Grass IS 67.36%
PERCENTAGE OF AREA FOR TYPE Trees IS 32.23%
PERCENTAGE OF AREA FOR TYPE Road IS 0.00%
PERCENTAGE OF AREA FOR TYPE Water IS 0.00%
PERCENTAGE OF AREA FOR TYPE Sky IS 0.41%
PERCENTAGE OF AREA FOR TYPE Soil IS 0.00%
PERCENTAGE OF AREA FOR TYPE Mountain IS 0.00%

TOTAL EDGE LENGTH: 20.1161 IN.

LINEAR EDGES BETWEEN TYPES (INCHES)

	Man-Made	Grass	Trees	Road	Water	Sky	Soil	Mountain
Man-Made	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Grass	0.0000	13.0401	5.6733	0.0000	0.0000	0.0000	0.0000	0.0000
Trees	0.0000	5.6733	0.0000	0.0000	0.0000	1.4027	0.0000	0.0000
Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Sky	0.0000	0.0000	1.4027	0.0000	0.0000	0.0000	0.0000	0.0000
Soil	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mountain	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

NUMBER OF VEHICLES: 0

GREEN VEGETATION PRESENT: NO

Appendix C
Fort A. P. Hill, VA

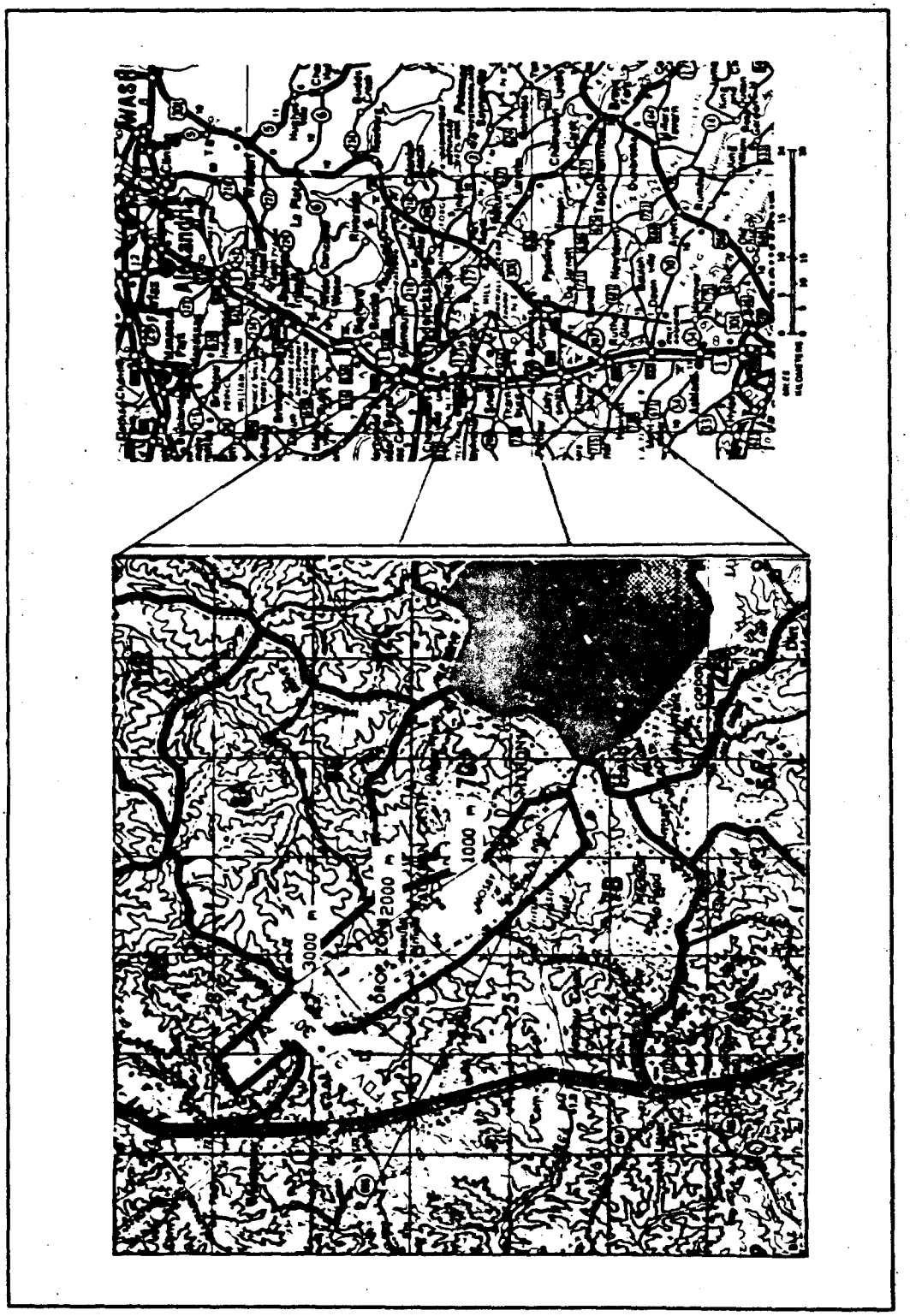
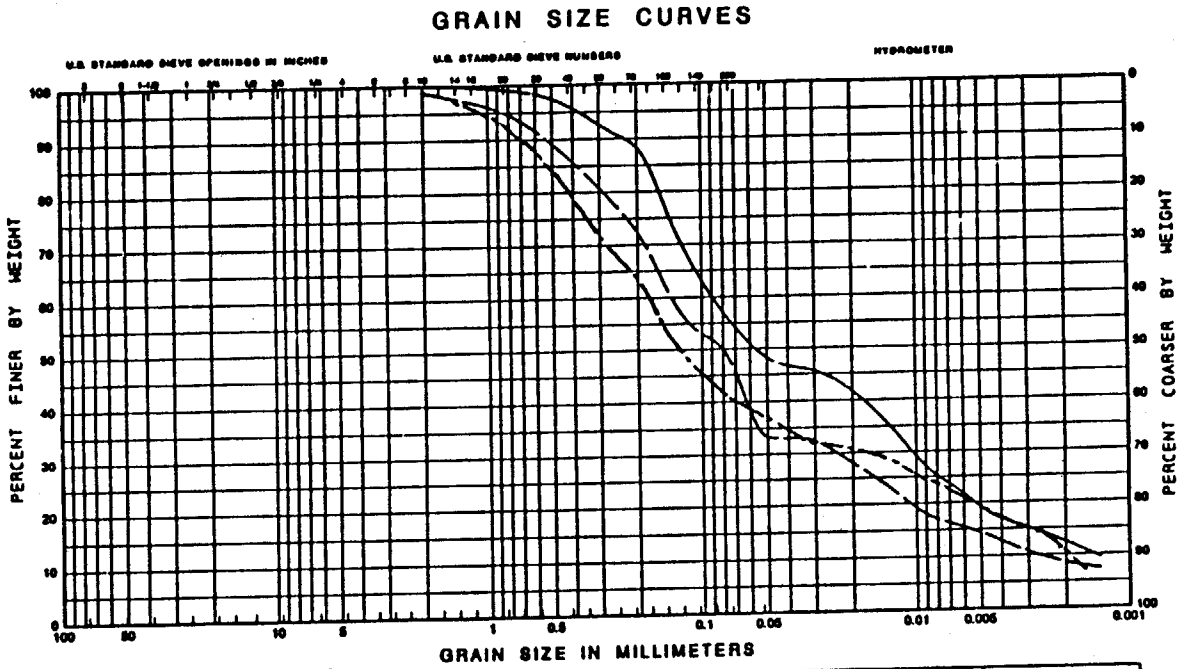


Figure C1. Site location and ground truth locations



GRAVEL	SAND			SILT	CLAY
	Course	Medium	Fine		

BORING NO.	SAMPLE NO.	Curve	CLASSIFICATION	WATER CONTENT %	ATTERBERG LIMITS LL	PL	PI	UNCONFINED COMPRESSION STRESS	STRAIN %	UNIT DRY WEIGHT	CONSOLIDATION	MECHANICAL ANALYSIS
1		———	Tan clayey sand with organics (SC)		29	16	13					
2		———	Tan organic sand-silt mixture (OL)		17	14	3					
3		———	Tan silty sand with organics (SM)		23	19	4					

Figure C2. Soils laboratory report

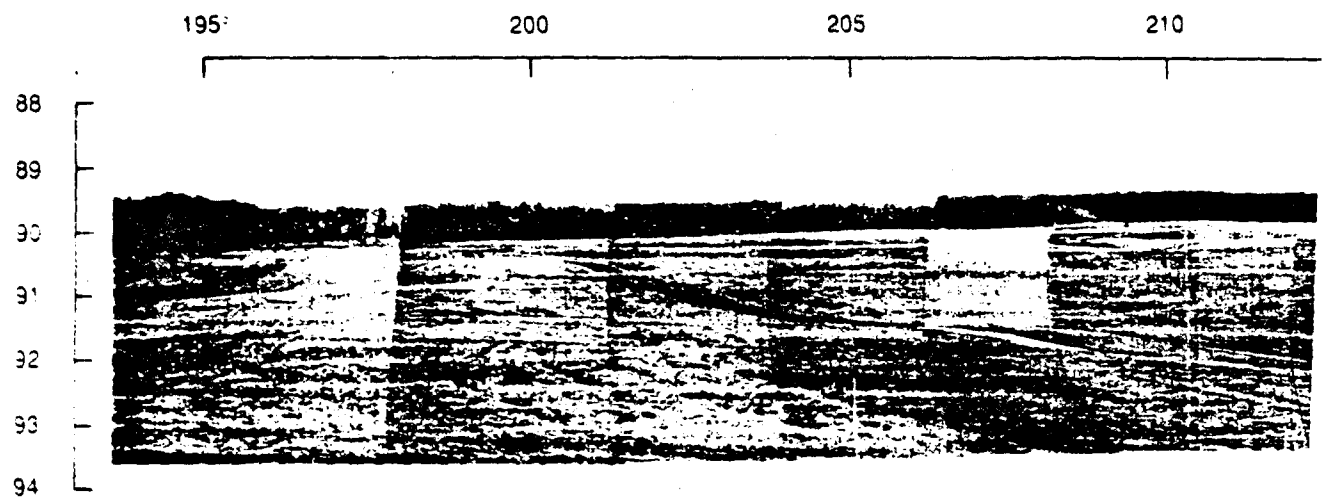
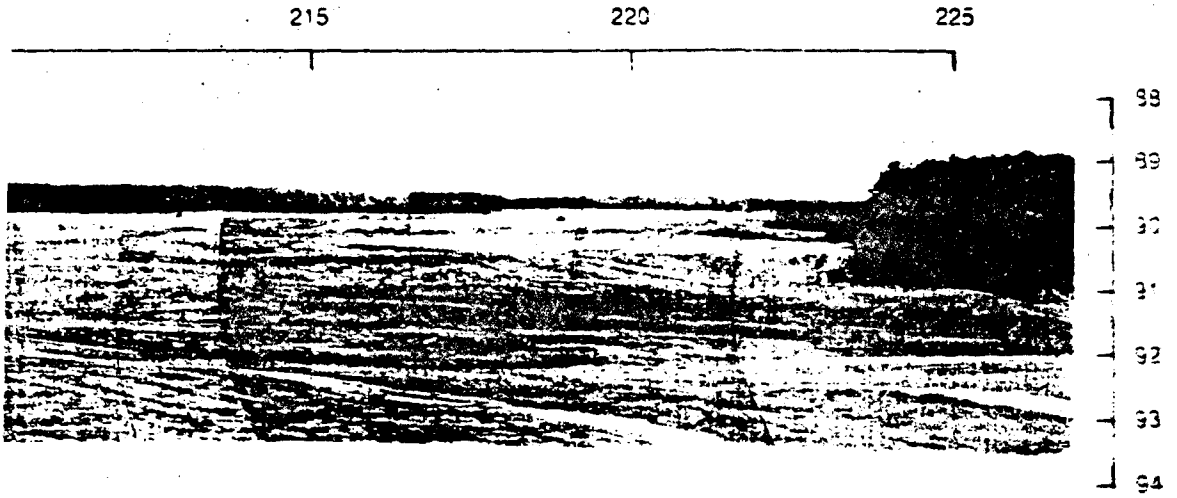


Figure C3. Mosaic photography


215
220
225
88
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94

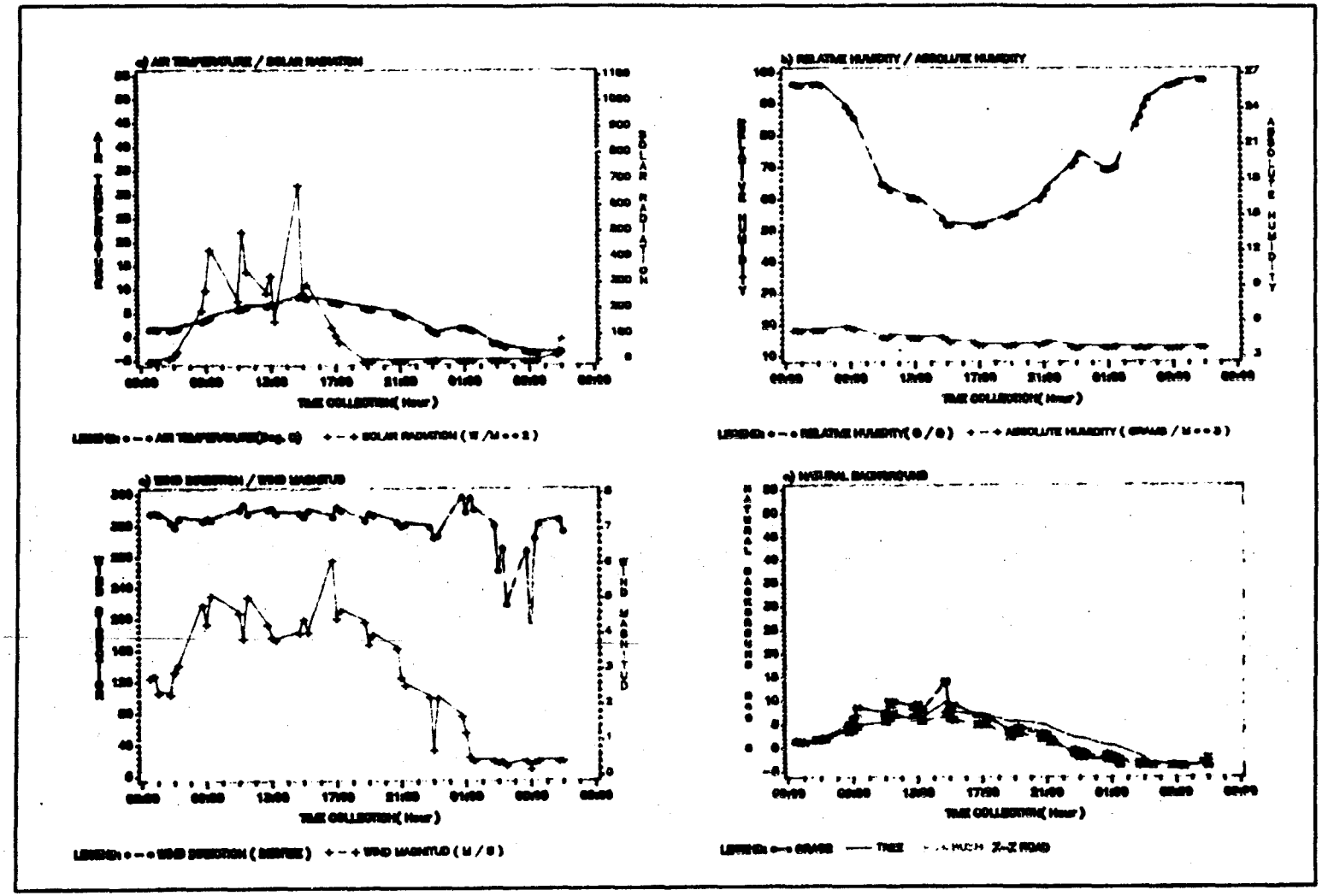


Figure C4. Diurnal meterological summary, 15-16 March 1991

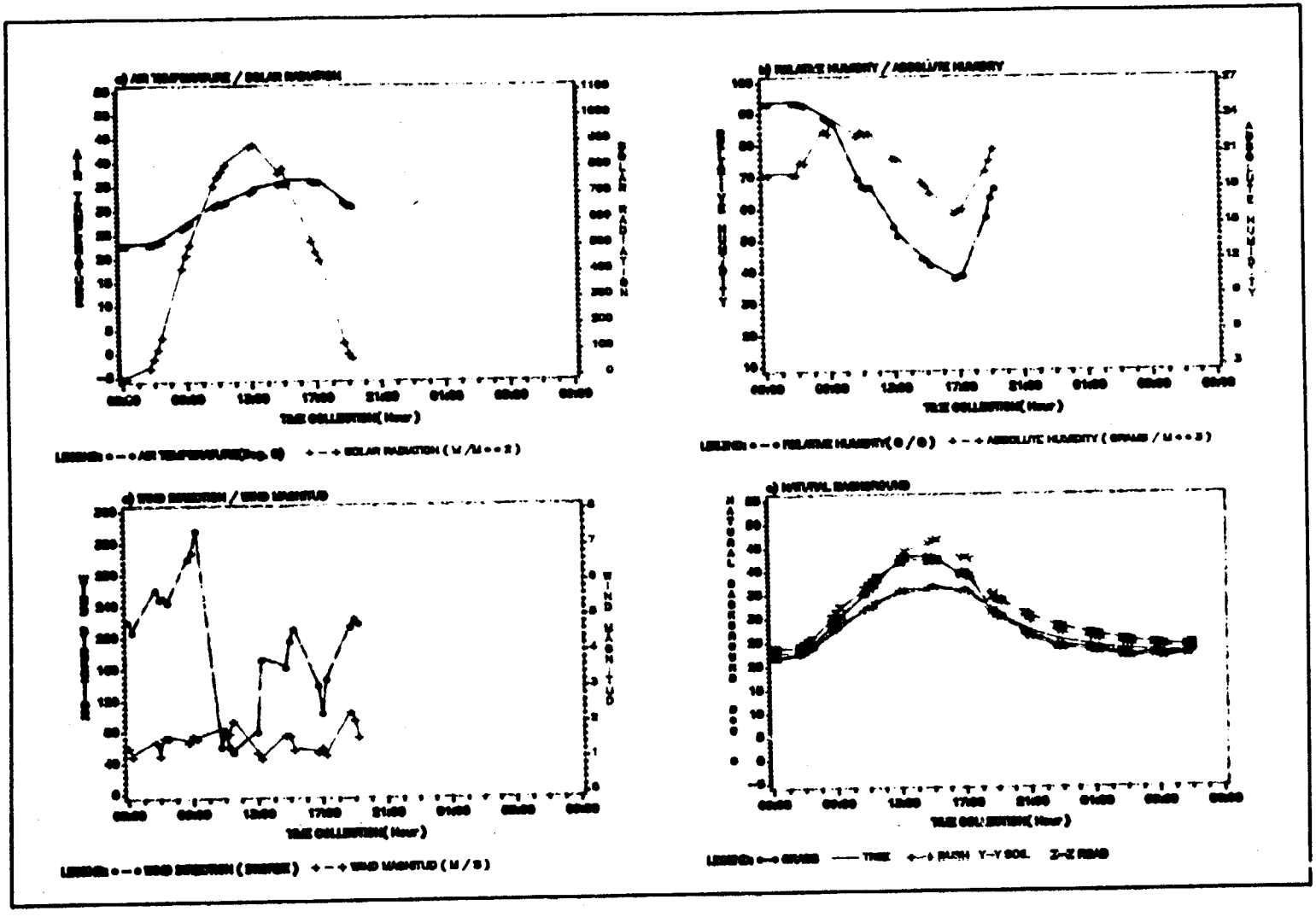


Figure C5. Diurnal meterological summary, 20-21 July 1991

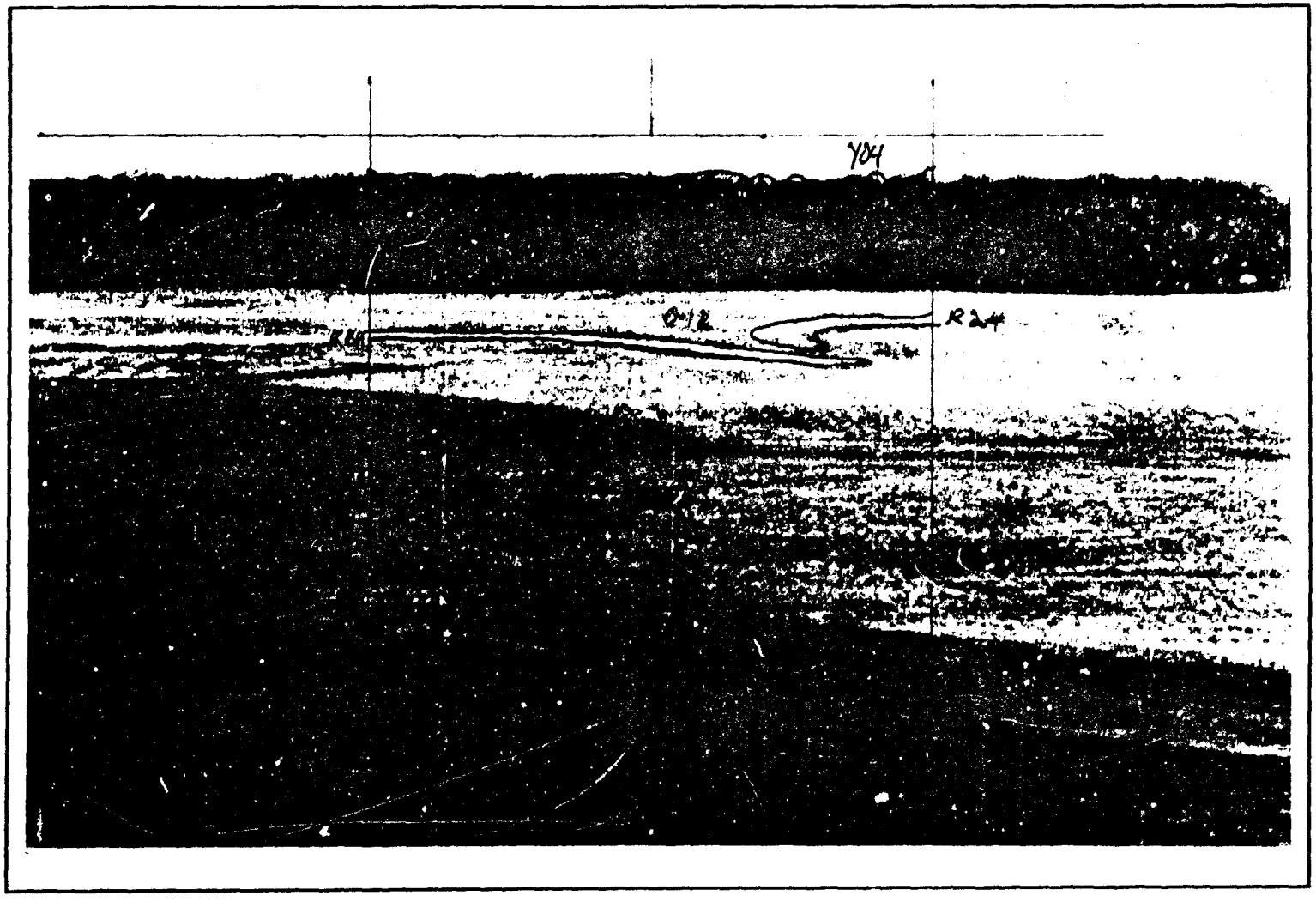


Figure C6. Photointerpretation of scene #5

Table C1
Topographic Survey and Sampling Locations at APH

TYPE OF MEASUREMENT	VIEW	AZIMUTH ANGLE	ELEVATION ANGLE	SURVEYED RANGE (M)	PASSIVE RANGE (M)	UTM EASTING	UTM NORTHING	ELEVATION (M)
camera pointing angle	1	297.833	90.750	.	500	.	.	.
camera pointing angle	2	300.333	90.750	.	480	.	.	.
camera pointing angle	3	302.833	90.750	.	510	.	.	.
camera pointing angle	4	305.333	90.750	.	610	.	.	.
camera pointing angle	5	307.833	90.750	.	780	.	.	.
camera pointing angle	6	310.333	90.750	.	820	.	.	.
camera pointing angle	7	312.833	90.750	.	780	.	.	.
camera pointing angle	8	315.333	90.750	.	760	.	.	.
camera pointing angle	9	317.833	90.750	.	760	.	.	.
camera pointing angle	10	320.333	90.750	.	740	.	.	.
camera pointing angle	11	322.833	90.750	.	710	.	.	.
surveyed point	.	298.761	90.437	714.91	.	92965.69	24714.43	68.185
surveyed point	.	299.165	90.673	504.49	.	93151.63	24616.44	67.710
surveyed point	.	299.489	90.245	1180.67	.	92564.69	24951.66	68.586
surveyed point	.	302.045	90.196	1528.80	.	92296.54	25181.61	68.415
surveyed point	.	302.266	90.498	771.54	.	92940.01	24782.34	66.937
surveyed point	.	302.417	90.792	460.26	.	93203.89	24617.17	67.279
surveyed point	.	302.452	90.294	1230.91	.	92553.71	25030.96	67.332
surveyed point	.	302.805	94.365	101.92	.	93506.98	24425.52	65.883
surveyed point	.	303.319	90.216	1980.61	.	91937.35	25458.40	66.179
surveyed point	.	305.355	90.439	943.02	.	92823.30	24916.12	66.412
surveyed point	.	306.940	90.758	503.79	.	93189.76	24673.20	66.977
surveyed point	.	307.579	90.349	1172.45	.	92663.23	25085.47	66.501
surveyed point	.	308.720	90.301	1440.96	.	92468.15	25271.78	66.060
surveyed point	.	308.864	90.184	2305.39	.	91797.35	25817.04	66.241
surveyed point	.	309.911	90.101	2449.08	.	91713.84	25941.77	69.330
surveyed point	.	310.449	90.107	2378.21	.	91782.61	25913.38	69.213
surveyed point	.	311.587	90.176	1966.93	.	92121.23	25676.01	67.604
surveyed point	.	313.400	90.195	1920.08	.	92197.32	25689.72	67.115
surveyed point	.	314.050	90.123	2838.77	.	91552.07	26344.20	67.557
surveyed point	.	315.529	90.130	2340.36	.	91952.85	26040.54	68.330
surveyed point	.	316.482	90.505	863.60	.	92997.75	24996.68	66.024
surveyed point	.	317.167	90.110	2487.28	.	91901.37	26194.47	68.877
surveyed point	.	318.169	90.027	4542.04	.	90563.14	27754.80	71.504
surveyed point	.	318.183	90.053	3780.18	.	91071.95	27187.75	70.121
surveyed point	.	318.559	90.079	3384.70	.	91352.25	26907.78	68.947
surveyed point	.	318.769	90.014	4129.78	.	90870.44	27476.28	72.599
surveyed point	.	319.116	90.302	1680.22	.	92492.66	25640.76	64.777
surveyed point	.	319.751	90.353	1002.00	.	92945.01	25135.22	67.466

(Continued)

Table C1 (Concluded)

TYPE OF MEASUREMENT	VIEW	AZIMUTH ANGLE	ELEVATION ANGLE	SURVEYED RANGE (M)	PASSIVE RANGE (M)	UTM EAST'NG	UTM NORTHING	ELEVATION (M)
surveyed point	.	321.939	90.233	1677.85	.	92558.01	25691.52	66.815
surveyed point	.	321.979	91.013	697.12	.	93163.06	24919.56	61.321
surveyed point	.	322.197	89.972	3361.00	.	91532.27	27026.06	75.302
surveyed point	.	322.946	90.469	752.14	.	93139.18	24970.70	67.481
surveyed point	.	342.382	91.688	259.75	.	93513.81	24617.92	65.990
soil sample #1	.	.	.	.	.	93118.12	24727.37	66.350
soil sample #2	.	.	.	.	.	92151.49	25587.64	67.040
soil sample #3	.	.	.	.	.	91867.44	26146.40	71.420
camera position	.	.	.	.	.	93592.39	24370.46	73.640

Table C2
Vegetation and Soil Moisture Data

Vegetation		
	March (Dormant)	**July (Active)**
Trees: deciduous coniferous	11 to 13 m 18 to 24 m	13 to 15 m 18 to 24 m
Grass: tall short	0.8 to 1.1 m 0.2 m	1.0 to 1.5 m 0.25 m
Scrub/Bushes	1.0 to 1.5 m	1.0 to 1.5 m
Soil Moisture		
	March	**July**
Location	1 2 3	1 2 3
% Moisture	16% 14% 14.5%	5.5% 6.5% 6.0%

Table C3
Meterological and Radiometric Data

DAY AND TIME OF COLLECTION	VISITED SITE	AIR TEMP. (C)	SOLAR RADIATION (W/M**2)	WIND MAGNITUD (M/S)	WIND DIRECTION (DEGREES)	RELATIVE HUMIDITY (PERCENT)	BCKGND GRASS (C)	BCKGND BUSH (C)	BCKGND TREE (C)	BCKGND SOIL (C)	BCKGND ROAD (C)
14MAR91:00:15	APH	0.89	1.38	1.77	11.39	100.00	1.35	0.87	0.45	.	2.09
14MAR91:00:30	APH	0.84	1.31	1.48	8.56	100.00	1.29	0.82	0.47	.	2.02
14MAR91:00:45	APH	0.81	1.29	2.20	25.24	100.00	1.34	0.85	0.43	.	2.00
14MAR91:01:00	APH	0.81	1.17	1.81	19.77	100.00	1.33	0.86	0.40	.	2.00
14MAR91:01:15	APH	0.82	1.19	2.14	16.62	100.00	1.31	0.84	0.43	.	1.96
14MAR91:01:30	APH	0.81	1.14	1.82	5.40	100.00	1.27	0.86	0.41	.	1.96
14MAR91:01:45	APH	0.82	1.07	2.20	2.90	100.00	1.39	0.91	0.44	.	2.02
14MAR91:02:00	APH	0.84	1.17	2.15	5.84	100.00	1.36	0.91	0.48	.	2.00
14MAR91:02:15	APH	0.86	1.12	2.04	6.45	100.00	1.34	0.93	0.58	.	1.99
14MAR91:02:30	APH	0.88	0.90	1.70	14.22	100.00	1.45	0.98	0.55	.	2.00
14MAR91:02:45	APH	0.90	0.90	1.82	10.45	100.00	1.46	0.99	0.61	.	2.03
14MAR91:03:00	APH	0.92	0.83	2.89	30.82	100.00	1.47	1.03	0.61	.	2.00
14MAR91:03:15	APH	0.92	1.02	2.40	39.94	100.00	1.40	0.97	0.64	.	1.95
14MAR91:03:30	APH	0.93	0.90	1.86	10.79	100.00	1.46	1.00	0.70	.	2.00
14MAR91:03:45	APH	1.01	0.90	1.60	3.38	100.00	1.55	1.11	0.78	.	2.05
14MAR91:04:00	APH	1.07	0.97	1.86	2.84	100.00	1.61	1.22	0.94	.	2.09
14MAR91:04:15	APH	1.12	0.95	2.01	16.18	100.00	1.56	1.20	0.88	.	2.03
14MAR91:04:30	APH	1.17	0.80	1.96	23.85	100.00	1.68	1.26	0.96	.	2.09
14MAR91:04:45	APH	1.23	0.97	0.93	349.80	100.00	1.77	1.34	1.04	.	2.20
14MAR91:05:00	APH	1.35	1.02	1.77	337.40	100.00	1.89	1.42	1.06	.	2.25
14MAR91:05:15	APH	1.38	1.24	1.73	358.50	100.00	1.82	1.43	1.05	.	2.21
14MAR91:05:30	APH	1.37	1.12	1.56	352.30	100.00	1.76	1.38	0.99	.	2.17
14MAR91:05:45	APH	1.36	1.29	2.13	1.09	100.00	1.75	1.36	1.01	.	2.17
14MAR91:06:00	APH	1.39	1.21	0.96	0.28	100.00	1.64	1.20	0.90	.	2.10
14MAR91:06:15	APH	1.40	1.12	2.37	327.20	100.00	1.58	1.10	0.74	.	2.07
14MAR91:06:30	APH	1.29	1.38	2.26	347.20	100.00	1.56	1.12	0.82	.	2.08
14MAR91:06:45	APH	1.24	2.36	2.35	349.80	100.00	1.45	1.08	0.74	.	2.03
14MAR91:07:00	APH	1.21	3.84	2.31	354.00	100.00	1.36	1.04	0.72	.	1.99
14MAR91:07:15	APH	1.16	5.20	2.89	2.12	100.00	1.17	0.96	0.68	.	1.87
14MAR91:07:30	APH	1.09	7.17	2.52	353.50	100.00	0.95	.	0.67	.	1.64
14MAR91:07:45	APH	1.09	8.70	2.75	347.30	100.00	-0.01	0.90	0.74	.	1.73
14MAR91:08:00	APH	1.06	12.41	2.60	342.90	100.00	-0.03	0.02	0.56	.	1.51
14MAR91:08:15	APH	1.07	13.99	2.45	341.30	100.00	0.63	0.53	0.78	.	1.80
14MAR91:08:30	APH	1.19	6.87	2.21	337.40	100.00	1.13	1.14	0.82	.	1.94
14MAR91:08:45	APH	1.12	4.28	2.45	338.60	100.00	1.37	1.34	0.92	.	2.02
14MAR91:09:00	APH	1.10	8.94	2.59	351.90	100.00	1.37	1.37	0.93	.	2.06
14MAR91:09:15	APH	1.11	18.40	1.89	343.90	100.00	1.57	1.51	1.02	.	2.14
14MAR91:09:30	APH	1.19	31.33	1.29	341.40	100.00	1.80	1.65	1.05	.	2.24
14MAR91:09:45	APH	1.22	46.60	2.32	348.10	100.00	1.95	1.76	1.01	.	2.38
14MAR91:10:00	APH	1.20	53.01	2.82	333.00	100.00	2.02	1.78	1.03	.	2.46
14MAR91:10:15	APH	1.17	59.66	2.80	333.40	100.00	2.23	1.87	1.02	.	2.47
14MAR91:10:30	APH	1.20	101.10	2.20	342.20	100.00	2.16	1.78	1.07	.	2.62
14MAR91:10:45	APH	1.15	132.30	2.65	336.50	100.00	2.35	1.91	1.07	.	2.67
14MAR91:11:00	APH	1.20	234.00	2.52	345.80	100.00	3.26	2.47	1.24	.	3.02
14MAR91:11:15	APH	1.45	215.70	2.00	341.70	100.00	4.32	3.01	1.61	.	3.53
14MAR91:11:30	APH	1.56	152.20	2.69	341.60	100.00	3.60	2.35	1.36	.	3.32
14MAR91:11:45	APH	1.50	94.50	2.55	349.60	99.90	2.90	1.90	1.12	.	3.10
14MAR91:12:00	APH	1.47	91.80	2.72	340.30	99.90	2.95	1.95	1.27	.	3.20
14MAR91:12:15	APH	1.59	124.50	2.81	342.10	99.80	3.59	2.40	1.58	.	3.43
14MAR91:12:30	APH	1.74	133.80	3.24	341.40	99.70	3.75	2.47	1.63	.	3.59
14MAR91:12:45	APH	1.80	145.70	3.50	349.80	99.50	3.93	2.65	1.81	.	3.68

(Continued)

Table C3 (Continued)

DAY AND TIME OF COLLECTION	VISITED SITE	AIR TEMP. (C)	SOLAR RADIATION (W/M**2)	WIND MAGNITUD (M/S)	WIND DIRECTION (DEGREES)	RELATIVE HUMIDITY (PERCENT)	BCKGND GRASS (C)	BCKGND BUSH (C)	BCKGND TREE (C)	BCKGND SOIL (C)	BCKGND ROAD (C)
14MAR91:13:00	APH	1.90	95.20	2.91	341.00	99.30	3.29	2.27	1.61	.	3.48
14MAR91:13:15	APH	1.91	75.50	2.63	340.70	99.10	3.18	2.24	1.60	.	3.37
14MAR91:13:30	APH	1.91	85.30	3.03	343.50	98.90	3.29	2.35	1.73	.	3.41
14MAR91:13:45	APH	1.98	94.30	2.89	339.90	98.70	3.34	2.40	1.79	.	3.41
14MAR91:14:00	APH	1.99	83.50	3.10	339.90	98.50	3.40	2.42	1.80	.	3.52
14MAR91:14:15	APH	2.02	81.50	2.97	343.50	98.30	3.31	2.38	1.82	.	3.46
14MAR91:14:30	APH	2.06	81.80	3.02	337.80	98.30	3.39	2.52	1.87	.	3.43
14MAR91:14:45	APH	2.03	67.98	3.22	345.00	98.20	3.13	2.34	1.84	.	3.30
14MAR91:15:00	APH	1.97	45.45	3.03	335.20	98.20	2.72	2.00	1.67	.	3.12
14MAR91:15:15	APH	1.90	54.97	3.31	341.90	98.30	2.82	2.03	1.74	.	3.14
14MAR91:15:30	APH	1.96	58.98	2.79	346.30	98.40	3.09	2.24	1.89	.	3.26
14MAR91:15:45	APH	2.00	51.84	2.92	331.70	98.40	2.90	2.15	1.83	.	3.23
14MAR91:16:00	APH	1.98	56.62	3.41	338.50	98.30	2.85	2.12	1.85	.	3.14
14MAR91:16:15	APH	1.98	60.75	3.43	330.70	98.20	2.86	2.09	1.80	.	3.11
14MAR91:16:30	APH	1.89	44.07	3.39	332.90	98.20	2.59	1.83	1.55	.	2.96
14MAR91:16:45	APH	1.78	42.25	3.05	335.20	98.40	2.60	1.86	1.58	.	2.94
14MAR91:17:00	APH	1.75	39.43	3.22	343.70	98.50	2.60	1.84	1.56	.	2.89
14MAR91:17:15	APH	1.70	32.85	3.41	346.00	98.50	2.36	1.69	1.47	.	2.82
14MAR91:17:30	APH	1.66	18.11	3.48	341.70	98.50	2.00	1.48	1.43	.	2.64
14MAR91:17:45	APH	1.64	10.66	3.25	340.60	98.50	1.91	1.43	1.42	.	2.56
14MAR91:18:00	APH	1.63	6.26	3.00	337.20	98.40	1.84	1.37	1.41	.	2.50
14MAR91:18:15	APH	1.64	2.74	3.23	339.00	98.40	1.77	1.34	1.41	.	2.40
14MAR91:18:30	APH	1.62	0.49	3.31	339.00	98.50	1.67	1.33	1.46	.	2.31
14MAR91:18:45	APH	1.62	0.32	3.20	330.90	98.40	1.58	1.57	1.40	.	2.28
14MAR91:19:00	APH	1.62	0.07	2.14	343.70	98.50	1.63	1.67	1.44	.	2.29
14MAR91:19:15	APH	1.63	0.10	2.40	344.40	98.60	1.71	1.72	1.47	.	2.33
14MAR91:19:30	APH	1.67	0.05	2.77	333.60	98.60	1.76	1.74	1.51	.	2.37
14MAR91:19:45	APH	1.71	0.05	2.20	348.90	98.50	1.78	1.79	1.55	.	2.38
14MAR91:20:00	APH	1.75	0.00	1.96	344.40	98.50	1.80	1.81	1.64	.	2.39
14MAR91:20:15	APH	1.80	0.19	2.31	343.10	98.40	1.86	1.85	1.62	.	2.40
14MAR91:20:30	APH	1.84	0.17	2.48	340.30	98.50	1.86	1.87	1.60	.	2.40
14MAR91:20:45	APH	1.84	0.00	2.04	346.10	98.50	1.87	1.87	1.68	.	2.43
14MAR91:21:00	APH	1.85	0.12	2.14	335.90	98.50	1.89	1.89	1.68	.	2.41
14MAR91:21:15	APH	1.85	0.00	2.56	340.90	98.40	1.93	1.91	1.70	.	2.43
14MAR91:21:30	APH	1.83	0.17	2.13	344.80	98.50	1.91	1.88	1.67	.	2.40
14MAR91:21:45	APH	1.82	0.15	2.69	342.30	98.60	1.90	1.89	1.64	.	2.43
14MAR91:22:00	APH	1.79	0.17	3.12	342.30	98.70	1.94	1.90	1.60	.	2.44
14MAR91:22:15	APH	1.76	0.27	2.76	344.80	98.80	1.96	1.89	1.59	.	2.46
14MAR91:22:30	APH	1.76	0.22	2.75	341.40	99.00	1.94	1.91	1.67	.	2.44
14MAR91:22:45	APH	1.80	0.22	2.49	339.10	99.10	1.92	1.91	1.63	.	2.41
14MAR91:23:00	APH	1.87	0.22	2.53	329.00	99.20	2.00	1.94	1.67	.	2.41
14MAR91:23:15	APH	1.92	0.17	2.67	335.30	99.20	2.05	2.00	1.74	.	2.45
14MAR91:23:30	APH	1.97	0.24	2.66	334.20	99.10	2.10	2.03	1.79	.	2.47
14MAR91:23:45	APH	2.02	0.17	2.73	332.50	99.00	2.16	2.06	1.80	.	2.46
15MAR91:00:00	APH	2.06	0.27	2.47	329.20	98.90	2.16	2.08	1.86	.	2.47
15MAR91:00:15	APH	2.09	0.12	2.10	337.20	98.90	2.19	2.10	1.83	.	2.48
15MAR91:00:30	APH	2.07	0.15	1.38	339.30	98.90	2.21	2.12	1.86	.	2.50
15MAR91:00:45	APH	2.03	0.17	2.16	335.20	99.00	2.17	2.09	1.83	.	2.45
15MAR91:01:00	APH	2.04	0.17	2.70	334.80	99.10	2.88	2.64	2.75	.	2.58
15MAR91:01:15	APH	2.07	0.07	3.02	335.20	99.10	2.15	2.23	2.02	.	.
15MAR91:01:30	APH	2.09	0.12	3.03	335.80	99.10	2.16	2.22	2.02	.	.

(Continued)

Table C3 (Continued)

DAY AND TIME OF COLLECTION	VISITED SITE	AIR TEMP. (C)	SOLAR RADIATION (W/M**2)	WIND MAGNITUD (M/S)	WIND DIRECTION (DEGREES)	RELATIVE HUMIDITY (PERCENT)	BCKGND GRASS (C)	BCKGND BUSH (C)	BCKGND TREE (C)	BCKGND SOIL (C)	BCKGND ROAD (C)
15MAR91:01:45	APH	2.10	0.22	3.20	335.40	98.90	2.15	2.21	2.03	.	.
15MAR91:02:00	APH	2.10	0.27	2.83	337.20	98.80	2.13	2.19	2.03	.	.
15MAR91:02:15	APH	2.12	0.22	3.14	331.60	98.70	2.11	2.19	2.06	.	.
15MAR91:02:30	APH	2.13	0.05	2.98	337.60	98.50	2.09	2.18	2.06	.	.
15MAR91:02:45	APH	2.12	0.17	2.97	345.00	98.30	1.94	2.10	2.02	.	.
15MAR91:03:00	APH	2.10	0.27	2.82	337.60	98.20	1.62	1.89	1.86	.	.
15MAR91:03:15	APH	2.02	0.27	2.43	343.80	98.10	1.04	1.54	1.61	.	.
15MAR91:03:30	APH	1.97	0.10	3.18	338.10	98.00	1.38	1.85	1.75	.	.
15MAR91:03:45	APH	1.99	0.15	3.00	335.40	98.00	1.43	1.86	1.76	.	.
15MAR91:04:00	APH	1.98	0.12	3.06	338.90	97.90	1.40	1.90	1.87	.	.
15MAR91:04:15	APH	2.00	0.12	3.09	341.40	97.80	1.41	1.86	1.82	.	.
15MAR91:04:30	APH	1.93	0.12	3.04	337.80	97.70	0.87	1.45	1.58	.	.
15MAR91:04:45	APH	1.83	0.02	2.95	343.20	97.60	0.51	1.26	1.41	.	.
15MAR91:05:00	APH	1.83	0.07	2.50	347.70	97.50	1.[illegible]	1.79	1.76	.	.
15MAR91:05:15	APH	1.92	0.78	2.76	339.80	97.40	1.5[illegible]	2.03	1.87	.	.
15MAR91:05:30	APH	1.99	0.15	2.81	337.90	97.10	1.47	1.92	1.86	.	.
15MAR91:05:45	APH	1.96	0.15	2.87	338.50	96.70	1.22	1.69	1.72	.	.
15MAR91:06:00	APH	1.89	0.02	2.39	336.80	96.70	1.25	1.72	1.65	.	.
15MAR91:06:15	APH	1.84	0.63	2.54	332.10	96.70	1.24	1.69	1.62	.	.
15MAR91:06:30	APH	1.81	3.28	2.49	329.70	96.80	1.15	1.61	1.58	.	.
15MAR91:06:45	APH	1.78	11.73	2.34	326.20	96.90	1.69	1.69	1.81	.	1.88
15MAR91:07:00	APH	1.92	18.92	2.98	320.60	97.00	1.90	2.02	1.93	.	1.91
15MAR91:07:15	APH	2.16	36.72	3.18	331.00	96.70	2.34	2.24	2.08	.	1.98
15MAR91:07:30	APH	2.34	47.51	3.14	330.80	96.10	2.54	2.46	2.34	.	2.13
15MAR91:07:45	APH	2.55	77.50	3.17	329.80	95.60	3.30	2.82	2.58	.	2.39
15MAR91:08:00	APH	2.84	85.40	3.59	331.20	94.90	3.42	2.97	2.94	.	2.63
15MAR91:08:15	APH	3.07	103.20	3.77	335.90	93.50	3.85	3.25	3.18	.	2.79
15MAR91:08:30	APH	3.36	151.40	4.75	326.10	91.80	4.50	3.46	3.45	.	3.18
15MAR91:08:45	APH	3.65	199.30	4.88	328.10	90.00	5.27	4.21	3.78	.	3.54
15MAR91:09:00	APH	4.02	276.70	4.33	331.40	88.10	6.48	5.22	4.17	.	3.89
15MAR91:09:15	APH	4.50	435.90	5.14	329.10	86.30	8.68	6.91	4.99	.	4.61
15MAR91:09:30	APH	5.23	694.20	4.59	328.10	82.70	11.40	9.43	5.77	.	5.92
15MAR91:09:45	APH	5.78	666.50	5.14	326.80	78.50	9.35	7.44	4.73	.	5.53
15MAR91:10:00	APH	5.76	422.60	4.14	347.50	75.20	7.04	6.11	4.44	.	4.43
15MAR91:10:15	APH	6.11	499.60	5.25	335.30	71.70	8.08	6.61	5.12	.	5.45
15MAR91:10:30	APH	6.20	684.40	4.61	347.70	68.82	13.95	11.06	6.86	.	7.67
15MAR91:10:45	APH	6.61	438.10	4.53	348.60	66.15	8.34	7.25	5.39	.	5.84
15MAR91:11:00	APH	6.19	235.30	4.65	342.20	65.46	7.47	6.64	5.36	.	5.72
15MAR91:11:15	APH	6.42	506.10	3.93	349.00	64.96	10.14	8.76	6.47	.	6.49
15MAR91:11:30	APH	6.67	348.60	5.10	336.80	63.72	9.91	8.51	6.49	.	7.10
15MAR91:11:45	APH	6.53	359.10	3.82	354.60	64.02	9.65	8.40	6.57	.	6.59
15MAR91:12:00	APH	6.79	389.90	4.48	353.90	63.13	8.74	7.75	6.30	.	6.60
15MAR91:12:15	APH	7.01	536.80	3.40	348.30	62.76	13.02	10.52	7.65	.	8.45
15MAR91:12:30	APH	7.08	328.60	4.35	1.32	61.31	8.47	7.74	5.99	.	6.24
15MAR91:12:45	APH	6.81	264.60	4.31	342.20	61.19	9.04	7.95	6.36	.	6.47
15MAR91:13:00	APH	7.22	332.30	3.96	343.60	61.05	9.46	8.63	7.10	.	6.96
15MAR91:13:15	APH	6.98	156.30	3.87	336.90	60.66	7.97	7.48	6.32	.	5.74
15MAR91:13:30	APH	7.54	615.40	3.75	340.20	60.09	16.42	13.29	9.50	.	9.03
15MAR91:13:45	APH	7.96	407.90	4.39	341.40	58.30	10.28	9.01	7.35	.	7.38
15MAR91:14:00	APH	7.68	229.70	4.95	330.60	57.60	9.39	8.73	7.15	.	6.45
15MAR91:14:15	APH	7.90	337.10	3.92	347.80	56.66	9.12	8.39	7.28	.	6.53

(Continued)

Table C3 (Continued)

DAY AND TIME OF COLLECTION	VISITED SITE	AIR TEMP. (C)	SOLAR RADIATION (W/M**2)	WIND MAGNITUD (M/S)	WIND DIREC ION (DEGREES)	RELATIVE HUMIDITY (PERCENT)	BCKGND GRASS (C)	BCKGND BUSH (C)	BCKGND TREE (C)	BCKGND SOIL (C)	BCKGND ROAD (C)
15MAR91:14:30	APH	8.22	354.80	4.36	334.10	56.11	11.39	9.88	8.30	.	6.99
15MAR91:14:45	APH	8.74	684.90	4.08	337.60	54.65	14.47	13.47	9.75	.	7.18
15MAR91:15:00	APH	8.74	265.00	4.47	333.50	52.63	8.20	7.82	7.12	.	6.41
15MAR91:15:15	APH	8.41	297.80	4.09	340.60	52.63	9.24	8.76	7.60	.	6.06
15MAR91:15:30	APH	8.50	254.70	4.32	342.40	52.09	10.37	9.67	8.36	.	6.94
15MAR91:15:45	APH	8.28	205.00	4.78	334.20	52.01	8.66	8.34	7.57	.	5.84
15MAR91:16:00	APH	8.21	212.30	5.44	335.30	51.93	8.14	7.94	7.56	.	5.93
15MAR91:16:15	APH	8.09	275.20	5.31	331.30	51.71	9.77	9.43	8.41	.	6.13
15MAR91:16:30	APH	8.16	181.40	5.44	335.30	51.38	7.17	7.29	7.10	.	5.19
15MAR91:16:45	APH	7.62	132.60	6.14	332.70	52.06	6.88	6.87	6.89	.	5.01
15MAR91:17:00	APH	7.49	101.70	4.47	345.40	52.49	6.71	6.81	6.86	.	5.01
15MAR91:17:15	APH	7.25	73.00	4.70	340.70	52.47	6.49	6.60	6.80	.	4.94
15MAR91:17:30	APH	7.13	49.49	4.49	339.30	53.07	6.07	6.30	6.59	.	4.75
15MAR91:17:45	APH	6.97	23.65	4.91	340.40	53.35	5.68	5.91	6.42	.	4.53
15MAR91:18:00	APH	6.80	9.77	4.13	331.70	54.09	5.40	5.43	6.32	.	4.36
15MAR91:18:15	APH	6.67	5.04	5.07	340.80	54.65	5.18	5.45	6.27	.	4.16
15MAR91:18:30	APH	6.61	1.21	3.96	330.40	54.58	5.09	5.15	6.18	.	4.04
15MAR91:18:45	APH	6.42	0.48	4.38	328.30	55.13	3.67	3.98	5.54	.	2.36
15MAR91:19:00	APH	6.13	1.02	3.75	337.00	55.94	3.86	4.31	5.57	.	2.99
15MAR91:19:15	APH	6.10	1.19	4.02	334.80	56.19	4.18	4.68	5.65	.	3.17
15MAR91:19:30	APH	6.02	1.21	3.80	331.30	56.83	4.50	4.86	5.79	.	3.58
15MAR91:19:45	APH	5.95	1.19	2.98	329.60	57.34	3.98	4.44	5.49	.	3.35
15MAR91:20:00	APH	5.63	1.21	3.02	327.70	59.34	3.62	4.22	5.36	.	2.92
15MAR91:20:15	APH	5.41	1.19	3.07	324.50	60.09	3.50	4.21	5.33	.	2.79
15MAR91:20:30	APH	5.38	1.19	3.24	322.80	61.16	3.76	4.28	5.24	.	2.87
15MAR91:20:45	APH	5.39	1.09	3.64	326.20	60.70	2.81	3.47	4.96	.	2.11
15MAR91:21:00	APH	4.94	1.12	2.81	321.00	62.28	2.83	3.39	4.78	.	2.18
15MAR91:21:15	APH	4.61	1.12	2.58	323.10	64.35	1.84	2.39	4.23	.	1.31
15MAR91:21:30	APH	4.11	1.16	2.86	324.10	65.10	0.73	1.23	3.63	.	0.39
15MAR91:21:45	APH	3.34	1.12	2.91	323.00	66.99	0.19	1.12	3.35	.	-0.15
15MAR91:22:00	APH	2.69	1.00	2.63	321.20	69.35	-0.44	0.35	2.70	.	-0.43
15MAR91:22:15	APH	2.22	1.21	2.39	323.50	71.00	-1.05	-0.01	2.46	.	-0.66
15MAR91:22:30	APH	2.53	1.16	2.35	327.30	70.90	-1.14	0.03	2.40	.	-0.69
15MAR91:22:45	APH	2.03	1.24	2.25	319.40	71.30	-1.29	-0.06	2.12	.	-0.94
15MAR91:23:00	APH	1.38	1.24	0.74	305.90	72.90	-1.88	-0.41	2.03	.	-1.05
15MAR91:23:15	APH	0.95	1.24	2.22	308.40	75.10	-1.92	-0.67	1.96	.	-1.19
15MAR91:23:30	APH	0.81	1.29	2.09	321.70	76.40	-2.07	-0.76	1.61	.	-1.32
15MAR91:23:45	APH	1.18	1.24	2.29	320.20	75.60	-1.87	-0.37	1.53	.	-1.55
16MAR91:00:00	APH	2.09	1.16	2.33	338.90	72.80	-2.77	-1.36	1.03	.	-1.89
16MAR91:00:15	APH	2.37	1.09	1.93	341.60	70.60	-2.70	-1.28	0.88	.	-1.98
16MAR91:00:30	APH	2.28	1.12	1.95	344.20	70.00	-2.72	-1.42	0.73	.	-1.98
16MAR91:00:45	APH	2.19	0.92	1.71	358.00	70.20	-2.33	-0.91	0.53	.	-1.90
16MAR91:01:00	APH	2.15	1.04	1.25	339.20	70.00	-2.43	-1.18	0.59	.	-1.89
16MAR91:01:15	APH	1.86	1.00	0.56	357.00	70.40	-2.62	-1.65	0.41	.	-2.04
16MAR91:01:30	APH	1.51	1.00	0.44	342.00	71.00	-3.61	-2.39	0.01	.	-2.39
16MAR91:01:45	APH	1.33	1.12	0.44	343.10	71.40	-4.36	-3.47	-0.42	.	-2.71
16MAR91:02:00	APH	0.92	1.12	0.44	339.10	72.30	-4.69	-3.63	-0.59	.	-2.70
16MAR91:02:15	APH	0.80	1.09	0.44	291.20	72.90	-4.84	-4.01	-0.74	.	-2.85
16MAR91:02:30	APH	-0.30	1.02	0.36	294.80	78.20	-4.98	-4.28	-1.13	.	-3.05
16MAR91:02:45	APH	-1.19	1.07	0.44	322.50	84.30	-5.21	-4.51	-1.58	.	-3.18
16MAR91:03:00	APH	-1.23	1.09	0.39	262.90	86.80	-5.48	-5.08	-2.06	.	-3.29

(Continued)

Table C3 (Continued)

DAY AND TIME OF COLLECTION	VISITED SITE	AIR TEMP. (C)	SOLAR RADIATION (W/M**2)	WIND MAGNITUD (M/S)	WIND DIRECTION (DEGREES)	RELATIVE HUMIDITY (PERCENT)	BCKGND GRASS (C)	BCKGND BUSH (C)	BCKGND TREE (C)	BCKGND SOIL (C)	BCKGND ROAD (C)
16MAR91:03:15	APH	-1.64	1.14	0.43	292.50	90.10	-6.02	-5.74	-2.80	.	-3.47
16MAR91:03:30	APH	-1.90	0.66	0.32	219.60	92.50	-6.17	-5.87	-3.08	.	-3.50
16MAR91:03:45	APH	-2.20	0.27	0.27	310.30	94.00	-6.07	-5.72	-2.90	.	-3.43
16MAR91:04:00	APH	-2.47	0.27	0.19	194.50	94.80	-6.20	-5.84	-3.22	.	-3.47
16MAR91:04:15	APH	-2.64	0.24	0.38	338.30	95.40	-6.23	-5.77	-3.07	.	-3.38
16MAR91:04:30	APH	-2.72	0.27	0.44	350.10	95.90	-6.66	-6.08	-3.32	.	-3.54
16MAR91:04:45	APH	-2.85	0.07	0.44	289.30	96.60	-6.88	-6.21	-3.52	.	-3.67
16MAR91:05:00	APH	-3.06	0.15	0.21	162.20	96.90	-6.61	-6.24	-3.48	.	-3.58
16MAR91:05:15	APH	-3.06	0.27	0.42	306.00	97.30	-6.91	-6.39	-3.70	.	-3.71
16MAR91:05:30	APH	-3.20	0.19	0.44	324.30	97.90	-7.13	-6.51	-3.95	.	-3.82
16MAR91:05:45	APH	-3.50	0.24	0.44	307.20	98.30	-6.95	-6.33	-3.62	.	-3.79
16MAR91:06:00	APH	-3.69	0.27	0.42	300.60	98.60	-6.97	-6.56	-3.80	.	-3.81
16MAR91:06:15	APH	-3.47	1.73	0.44	314.00	99.00	-7.23	-6.45	-4.00	.	-3.96
16MAR91:06:30	APH	-3.08	9.05	0.41	326.40	98.60	-6.91	-6.22	-4.05	.	-3.85
16MAR91:06:45	APH	-3.27	22.88	0.44	329.60	98.40	-5.69	-5.27	-3.47	.	-2.93
16MAR91:07:00	APH	-2.82	88.00	0.45	314.40	98.40	-3.84	-3.67	-2.48	.	-2.07
16MAR91:07:15	APH	-1.36	166.90	0.88	298.20	97.10	-0.92	-0.45	-0.87	.	-1.53
16MAR91:07:30	APH	0.07	220.60	1.70	312.80	94.30	1.29	1.86	0.33	.	-1.11
16MAR91:07:45	APH	1.32	261.80	2.60	319.60	88.10	3.49	3.26	1.28	.	-0.60
16MAR91:08:00	APH	2.43	316.00	2.55	319.20	79.90	5.53	4.73	1.94	.	0.29
16MAR91:08:15	APH	3.35	376.20	3.16	326.00	73.50	7.11	6.59	2.59	.	1.36
16MAR91:08:30	APH	.	.	.	.	.	8.16	7.21	2.97	.	1.88
16MAR91:08:45	APH	.	.	.	.	.	10.37	8.83	3.75	.	3.04
16MAR91:09:00	APH	.	.	.	.	.	11.73	9.66	4.54	.	4.40
16MAR91:09:15	APH	.	.	.	.	.	12.71	10.59	5.12	.	4.85
16MAR91:09:30	APH	.	.	.	.	.	13.71	11.16	5.57	.	5.58
16MAR91:09:45	APH	.	.	.	.	.	14.70	11.84	5.20	.	.
19JUL91:15:00	APH	35.60	240.90	2.07	234.40	45.64	.	.	.	.	.
19JUL91:15:15	APH	34.23	665.30	2.07	306.00	51.61	.	.	.	.	.
19JUL91:15:30	APH	34.29	715.00	2.45	252.70	51.84	.	.	.	.	.
19JUL91:15:45	APH	34.05	446.10	2.01	268.70	51.40	.	.	.	.	.
19JUL91:16:00	APH	33.99	632.20	2.82	252.70	52.28	.	.	.	.	.
19JUL91:16:15	APH	34.20	686.80	2.85	260.00	52.85	.	.	.	.	.
19JUL91:16:30	APH	34.65	785.00	3.79	244.40	52.68	41.44	35.81	.	50.23	.
19JUL91:16:45	APH	34.41	729.00	2.73	289.70	52.82	39.14	34.77	.	47.98	.
19JUL91:17:00	APH	34.31	556.80	2.82	272.70	52.36	36.38	33.23	.	45.00	.
19JUL91:17:15	APH	33.93	503.20	2.88	262.10	52.82	39.59	34.95	35.26	45.98	42.04
19JUL91:17:30	APH	33.72	483.40	2.51	267.10	53.67	40.08	35.15	35.47	45.92	42.12
19JUL91:17:45	APH	34.13	466.60	1.91	268.10	53.04	33.49	31.23	31.67	40.32	37.45
19JUL91:18:00	APH	31.92	136.00	2.49	39.26	54.19	29.17	28.80	28.54	36.05	34.01
19JUL91:18:15	APH	29.90	79.00	1.59	64.13	60.25	25.86	25.67	26.71	32.06	32.76
19JUL91:18:30	APH	27.69	64.10	1.09	345.70	81.10	23.05	23.55	22.90	28.63	29.52
19JUL91:18:45	APH	25.74	52.27	1.65	338.00	90.70	23.69	23.87	23.19	27.80	29.69
19JUL91:19:00	APH	25.39	80.80	1.67	352.10	92.30	24.25	23.78	23.46	27.54	29.93
19JUL91:19:15	APH	25.87	181.60	0.32	38.20	91.70	26.16	25.29	24.62	29.09	30.51
19JUL91:19:30	APH	26.69	194.20	0.45	146.00	90.70	27.28	26.50	25.66	30.01	31.01
19JUL91:19:45	APH	27.31	143.60	0.75	349.80	90.90	26.73	26.26	25.46	29.44	30.17
19JUL91:20:00	APH	27.06	81.70	0.83	293.80	91.20	26.22	25.94	25.50	28.88	29.77
19JUL91:20:15	APH	26.96	28.20	1.10	240.40	91.50	25.81	25.52	25.42	28.64	29.62
19JUL91:20:30	APH	26.43	5.08	1.43	250.20	92.40	25.65	25.53	25.25	28.25	29.34
19JUL91:20:45	APH	26.41	0.39	0.48	216.80	92.80	25.49	25.39	25.16	27.83	29.01

(Continued)

Table C3 (Continued)

DAY AND TIME OF COLLECTION	VISITED SITE	AIR TEMP. (C)	SOLAR RADIATION (W/M**2)	WIND MAGNITUD (M/S)	WIND DIRECTION (DEGREES)	RELATIVE HUMIDITY (PERCENT)	BCKGND GRASS (C)	BCKGND BUSH (C)	BCKGND TREE (C)	BCKGND SOIL (C)	BCKGND ROAD (C)
19JUL91:21:00	APH	25.98	0.00	0.45	247.70	92.80	24.94	25.05	24.88	27.29	28.26
19JUL91:21:15	APH	25.82	0.00	0.73	233.70	93.10	24.43	24.75	24.57	26.83	27.79
19JUL91:21:30	APH	25.71	0.00	1.42	241.50	93.20	24.38	24.50	24.48	26.43	27.42
19JUL91:21:45	APH	25.71	0.00	1.02	226.90	93.10	24.29	24.44	24.27	26.08	27.12
19JUL91:22:00	APH	25.70	0.00	1.31	227.70	92.70	24.34	24.41	24.21	25.95	26.88
19JUL91:22:15	APH	25.82	0.00	1.56	197.10	91.90	24.06	24.15	24.00	25.66	26.67
19JUL91:22:30	APH	25.46	0.00	1.46	207.60	92.00	23.75	23.88	23.71	25.48	26.34
19JUL91:22:45	APH	25.12	0.00	1.44	203.90	92.00	23.51	23.64	23.41	25.25	26.21
19JUL91:23:00	APH	24.77	0.00	2.49	213.60	91.90	23.37	23.38	23.23	24.97	25.95
19JUL91:23:15	APH	24.57	0.00	2.46	233.80	91.10	22.98	23.03	22.76	24.68	25.46
19JUL91:23:30	APH	24.46	0.00	2.18	232.10	91.00	22.71	22.78	22.48	24.26	25.34
19JUL91:23:45	APH	24.35	0.00	1.65	230.30	91.20	22.66	22.69	22.37	24.28	25.42
20JUL91:00:00	APH	24.28	0.00	1.49	226.90	91.40	22.50	22.50	22.25	24.13	25.21
20JUL91:00:15	APH	24.27	0.00	1.85	225.90	91.60	22.35	22.37	22.17	24.02	25.08
20JUL91:00:30	APH	24.22	0.00	1.29	249.20	91.80	22.32	22.43	22.18	23.85	24.91
20JUL91:00:45	APH	24.11	0.00	1.31	275.80	92.10	22.39	22.48	22.19	23.78	24.70
20JUL91:01:00	APH	24.09	0.00	1.42	270.80	92.30	22.49	22.62	22.21	23.57	24.64
20JUL91:01:15	APH	24.11	0.00	1.31	268.70	92.30	22.68	22.71	22.38	23.56	24.52
20JUL91:01:30	APH	24.11	0.00	1.00	312.20	92.30	22.49	22.59	22.40	23.52	24.47
20JUL91:01:45	APH	23.98	0.00	0.35	313.60	92.60	22.46	22.49	22.44	23.45	24.42
20JUL91:02:00	APH	24.01	0.00	1.57	192.40	92.80	22.43	22.43	22.46	23.44	24.41
20JUL91:02:15	APH	23.85	0.00	1.60	198.30	93.00	22.31	22.35	22.31	23.40	24.25
20JUL91:02:30	APH	23.71	0.00	1.23	210.00	93.20	22.01	22.18	22.15	23.29	24.10
20JUL91:02:45	APH	23.59	0.00	1.10	202.30	93.50	21.80	21.99	22.00	23.27	24.13
20JUL91:03:00	APH	23.45	0.00	1.15	212.60	93.60	21.70	21.90	21.92	23.11	24.06
20JUL91:03:15	APH	23.38	0.00	1.33	196.00	93.70	21.80	21.90	21.92	23.09	24.05
20JUL91:03:30	APH	23.39	0.00	1.43	223.80	93.80	22.06	22.07	22.02	23.08	24.10
20JUL91:03:45	APH	23.43	0.00	1.58	231.10	93.80	22.46	22.36	22.27	23.17	24.24
20JUL91:04:00	APH	23.48	0.00	1.08	233.20	93.80	22.45	22.35	22.39	23.12	24.13
20JUL91:04:15	APH	23.46	0.00	1.25	226.60	93.70	22.33	22.23	22.31	23.02	23.94
20JUL91:04:30	APH	23.40	0.00	1.14	214.30	93.60	22.13	22.05	22.19	22.86	23.86
20JUL91:04:45	APH	23.30	0.00	1.36	212.50	93.60	21.96	21.88	22.08	22.74	23.84
20JUL91:05:00	APH	23.17	0.00	1.38	222.30	93.70	21.79	21.73	21.94	22.62	23.79
20JUL91:05:15	APH	23.11	0.00	1.13	209.20	93.70	21.66	21.68	21.87	22.60	23.71
20JUL91:05:30	APH	23.04	0.00	1.31	215.80	93.80	21.64	21.64	21.80	22.61	23.72
20JUL91:05:45	APH	22.99	0.00	1.61	233.60	93.90	21.76	21.66	21.84	22.57	23.77
20JUL91:06:00	APH	23.01	1.20	1.81	232.80	94.00	21.94	21.82	21.98	22.55	23.78
20JUL91:06:15	APH	23.08	7.06	1.69	237.90	94.00	22.16	21.99	22.08	22.59	23.66
20JUL91:06:30	APH	23.15	19.25	1.66	242.40	93.90	22.38	22.12	22.20	22.74	23.78
20JUL91:06:45	APH	23.26	39.43	1.52	262.60	93.90	22.70	22.36	22.46	22.88	23.98
20JUL91:07:00	APH	23.47	76.80	1.14	250.60	93.80	23.28	22.77	22.87	23.24	24.50
20JUL91:07:15	APH	23.76	113.90	1.65	251.60	93.50	23.92	23.38	23.38	23.73	25.13
20JUL91:07:30	APH	24.07	159.40	1.64	246.60	93.10	24.29	23.66	23.77	24.15	25.61
20JUL91:07:45	APH	24.57	216.40	1.57	253.70	92.60	25.04	24.32	24.33	24.84	26.28
20JUL91:08:00	APH	25.04	251.80	1.67	276.80	91.90	25.87	24.96	24.87	25.62	27.35
20JUL91:08:15	APH	25.55	313.90	1.79	296.20	91.00	26.38	25.57	24.95	26.52	27.97
20JUL91:08:30	APH	26.08	375.40	1.68	307.40	90.00	27.46	26.34	25.80	27.37	29.01
20JUL91:08:45	APH	26.75	425.70	1.51	302.70	89.10	28.52	27.24	26.80	28.25	30.12
20JUL91:09:00	APH	27.27	476.60	1.69	311.20	88.20	29.12	27.72	27.39	29.23	31.21
20JUL91:09:15	APH	27.85	516.90	1.61	337.70	87.30	30.34	28.95	27.82	30.52	32.23
20JUL91:09:30	APH	28.66	560.90	1.19	350.50	85.90	31.45	29.43	29.16	31.79	32.84

(Continued)

Table C3 (Continued)

DAY AND TIME OF COLLECTION	VISITED SITE	AIR TEMP. (C)	SOLAR RADIATION (W/M**2)	WIND MAGNITUD (M/S)	WIND DIRECTION (DEGREES)	RELATIVE HUMIDITY (PERCENT)	BCKGND GRASS (C)	BCKGND BUSH (C)	BCKGND TREE (C)	BCKGND SOIL (C)	BCKGND ROAD (C)
20JUL91:09:45	APH	29.30	609.50	1.20	354.10	84.20	32.39	30.07	29.80	32.41	33.80
20JUL91:10:00	APH	29.83	653.20	1.30	7.49	82.40	33.76	31.09	30.53	33.36	35.24
20JUL91:10:15	APH	30.57	688.40	1.26	355.90	80.10	34.59	31.49	31.51	34.42	36.18
20JUL91:10:30	APH	31.10	722.00	2.30	17.57	74.80	35.00	31.76	31.74	34.18	36.39
20JUL91:10:45	APH	31.35	744.00	1.87	62.36	70.10	35.13	31.53	32.07	34.79	36.10
20JUL91:11:00	APH	31.75	777.00	1.86	77.40	67.69	36.81	32.27	32.45	35.81	36.98
20JUL91:11:15	APH	31.81	799.00	1.75	62.65	67.06	36.86	32.15	32.41	35.88	37.68
20JUL91:11:30	APH	32.13	824.00	2.11	55.91	67.19	38.29	33.35	33.27	36.97	38.69
20JUL91:11:45	APH	32.31	848.00	1.78	58.68	66.01	39.37	33.51	33.08	38.49	39.26
20JUL91:12:00	APH	32.79	878.00	1.25	106.70	64.57	40.73	34.18	34.56	38.93	40.69
20JUL91:12:15	APH	33.52	882.00	1.46	56.70	61.32	41.17	34.78	34.66	40.41	40.50
20JUL91:12:30	APH	33.92	898.00	1.01	136.40	58.23	41.07	34.52	34.70	41.35	41.07
20JUL91:12:45	APH	34.15	874.00	0.63	69.37	56.58	41.64	34.53	34.48	42.03	41.43
20JUL91:13:00	APH	34.21	891.00	1.21	81.10	54.89	42.09	35.78	35.20	42.67	41.80
20JUL91:13:15	APH	34.83	899.00	1.04	173.30	51.92	43.17	35.51	36.18	44.11	42.57
20JUL91:13:30	APH	35.23	910.00	0.73	145.20	49.22	43.33	35.70	35.53	44.37	41.72
20JUL91:13:45	APH	35.14	884.00	1.00	120.10	47.70	42.64	35.77	35.64	45.11	42.44
20JUL91:14:00	APH	35.15	872.00	1.68	24.97	47.72	43.58	36.25	36.34	45.61	42.97
20JUL91:14:15	APH	35.26	863.00	1.15	94.80	46.59	43.31	36.18	36.31	45.52	42.90
20JUL91:14:30	APH	35.80	831.00	1.46	151.20	44.60	42.81	36.07	36.11	45.37	42.28
20JUL91:14:45	APH	35.81	788.00	1.69	163.70	44.76	43.04	36.17	35.92	45.71	42.03
20JUL91:15:00	APH	35.85	808.00	1.68	197.00	43.92	42.70	36.73	36.18	46.20	42.33
20JUL91:15:15	APH	36.34	748.00	1.28	211.80	42.47	42.58	36.35	36.61	46.48	42.11
20JUL91:15:30	APH	36.21	741.00	1.17	144.70	41.83	42.44	36.25	37.05	45.47	42.44
20JUL91:15:45	APH	36.41	687.70	1.28	148.70	41.19	41.23	36.10	36.21	45.37	40.92
20JUL91:16:00	APH	36.17	637.20	1.07	126.70	39.62	40.63	35.76	36.08	44.75	40.64
20JUL91:16:15	APH	36.28	630.50	1.57	146.60	37.52	41.22	36.88	36.20	45.00	40.54
20JUL91:16:30	APH	36.56	566.80	0.36	81.00	37.25	39.79	36.11	36.58	44.33	40.23
20JUL91:16:45	APH	36.35	527.60	1.20	140.60	38.23	38.88	35.57	35.72	42.43	39.29
20JUL91:17:00	APH	36.06	486.10	1.34	105.30	38.83	39.35	35.94	36.03	42.69	39.51
20JUL91:17:15	APH	36.11	454.50	1.14	148.20	39.16	38.55	35.36	35.83	42.28	38.89
20JUL91:17:30	APH	36.23	422.20	0.69	124.20	38.80	38.35	35.28	36.02	41.98	38.68
20JUL91:17:45	APH	36.05	357.60	1.07	162.90	39.08	37.27	34.66	35.42	41.18	37.86
20JUL91:18:00	APH	35.28	281.70	2.74	202.30	45.25	35.76	33.88	34.75	39.88	36.85
20JUL91:18:15	APH	33.08	222.80	3.16	216.30	50.04	32.03	31.00	32.35	36.36	34.56
20JUL91:18:30	APH	32.45	207.00	2.97	222.40	52.31	32.13	30.98	31.92	35.56	34.82
20JUL91:18:45	APH	32.02	135.20	2.36	214.50	57.83	31.41	30.50	31.36	34.95	34.41
20JUL91:19:00	APH	31.38	93.30	2.12	224.30	63.84	30.53	29.79	30.66	33.87	33.72
20JUL91:19:15	APH	31.13	74.50	1.63	218.60	66.82	30.10	29.55	30.29	33.00	33.46
20JUL91:19:30	APH	31.07	61.86	1.36	231.70	68.03	29.67	29.29	29.97	32.52	32.98
20JUL91:19:45	APH	30.87	55.45	1.23	251.80	68.13	29.26	29.02	29.62	32.04	32.59
20JUL91:20:00	APH	30.60	40.05	1.60	256.50	67.63	28.73	28.76	29.23	31.39	32.06
20JUL91:20:15	APH	.	.	.	.	.	27.82	28.10	28.62	30.69	31.64
20JUL91:20:30	APH	.	.	.	.	.	27.28	27.65	28.14	30.24	31.21
20JUL91:20:45	APH	.	.	.	.	.	26.68	27.23	27.64	29.58	30.66
20JUL91:21:00	APH	.	.	.	.	.	25.93	26.67	27.19	28.99	30.19
20JUL91:21:15	APH	.	.	.	.	.	25.40	26.05	26.91	28.57	29.64
20JUL91:21:30	APH	.	.	.	.	.	24.88	25.57	26.57	28.14	29.38
20JUL91:21:45	APH	.	.	.	.	.	24.63	25.30	26.23	27.76	29.10
20JUL91:22:00	APH	.	.	.	.	.	24.58	25.18	26.09	27.59	28.92
20JUL91:22:15	APH	.	.	.	.	.	24.31	24.77	25.91	27.24	28.63

(Continued)

Table C3 (Concluded)

DAY AND TIME OF COLLECTION	VISITED SITE	AIR TEMP. (C)	SOLAR RADIATION (W/M**2)	WIND MAGNITUD (M/S)	WIND DIRECTION (DEGREES)	RELATIVE HUMIDITY (PERCENT)	BCKGND GRASS (C)	BCKGND BUSH (C)	BCKGND TREE (C)	BCKGND SOIL (C)	BCKGND ROAD (C)
20JUL91:22:30	APH	.	.	.	.	.	24.18	24.55	25.63	26.90	28.27
20JUL91:22:45	APH	.	.	.	.	.	23.69	24.15	25.26	26.53	28.08
20JUL91:23:00	APH	.	.	.	.	.	23.55	24.10	25.11	26.39	27.83
20JUL91:23:15	APH	.	.	.	.	.	23.49	23.79	24.98	26.10	27.53
20JUL91:23:30	APH	.	.	.	.	.	23.37	23.78	24.85	26.01	27.39
20JUL91:23:45	APH	.	.	.	.	.	23.30	23.64	24.66	25.82	27.31
21JUL91:00:00	APH	.	.	.	.	.	23.08	23.43	24.47	25.60	27.02
21JUL91:00:15	APH	.	.	.	.	.	23.09	23.41	24.32	25.41	26.87
21JUL91:00:30	APH	.	.	.	.	.	23.19	23.52	24.25	25.33	26.69
21JUL91:00:45	APH	.	.	.	.	.	23.23	23.54	24.17	25.25	26.56
21JUL91:01:00	APH	.	.	.	.	.	22.83	23.48	23.91	25.21	26.34
21JUL91:01:15	APH	.	.	.	.	.	22.79	23.16	23.82	25.03	26.14
21JUL91:01:30	APH	.	.	.	.	.	22.41	22.92	23.62	24.75	26.05
21JUL91:01:45	APH	.	.	.	.	.	22.26	22.84	23.48	24.58	25.74
21JUL91:02:00	APH	.	.	.	.	.	22.21	22.74	23.45	24.42	25.59
21JUL91:02:15	APH	.	.	.	.	.	22.37	22.81	23.34	24.39	25.51
21JUL91:02:30	APH	.	.	.	.	.	22.08	22.67	23.13	24.23	25.34
21JUL91:02:45	APH	.	.	.	.	.	21.81	22.41	23.08	24.03	25.23
21JUL91:03:00	APH	.	.	.	.	.	21.83	22.37	23.05	23.86	25.09
21JUL91:03:15	APH	.	.	.	.	.	21.69	22.06	22.99	23.76	24.98
21JUL91:03:30	APH	.	.	.	.	.	21.62	22.07	22.85	23.57	24.73
21JUL91:03:45	APH	.	.	.	.	.	21.54	21.99	22.77	23.50	24.66
21JUL91:04:00	APH	.	.	.	.	.	21.77	22.30	22.85	23.57	24.71
21JUL91:04:15	APH	.	.	.	.	.	21.68	22.17	22.68	23.53	24.59
21JUL91:04:30	APH	.	.	.	.	.	21.41	22.00	22.58	23.32	24.40
21JUL91:04:45	APH	.	.	.	.	.	22.06	22.48	22.77	23.33	24.38
21JUL91:05:00	APH	.	.	.	.	.	22.05	22.58	22.81	23.44	24.32
21JUL91:05:15	APH	.	.	.	.	.	21.60	22.41	22.57	23.41	24.12
21JUL91:05:30	APH	.	.	.	.	.	21.33	22.18	22.41	23.30	23.92
21JUL91:05:45	APH	.	.	.	.	.	21.33	22.01	22.30	23.18	23.87
21JUL91:06:00	APH	.	.	.	.	.	21.16	21.78	22.22	22.99	23.80
21JUL91:06:15	APH	.	.	.	.	.	21.41	21.88	22.20	23.05	23.75
21JUL91:06:30	APH	.	.	.	.	.	21.74	21.94	22.23	23.09	23.64
21JUL91:06:45	APH	.	.	.	.	.	22.14	22.35	22.52	23.27	23.88
21JUL91:07:00	APH	.	.	.	.	.	23.05	22.93	22.93	23.77	24.29
21JUL91:07:15	APH	.	.	.	.	.	23.79	23.38	23.53	24.24	24.75
21JUL91:07:30	APH	.	.	.	.	.	24.50	24.05	24.00	24.91	25.21
21JUL91:07:45	APH	.	.	.	.	.	25.06	24.70	24.62	.	25.78
21JUL91:08:00	APH	.	.	.	.	.	25.98	25.72	25.51	.	26.60

Table C4
Scene Content Reports for Fort A. P. Hill; Angular Scale of Photo Interpreted Equals 0.68 deg/in.

Scene #1 - March TOTAL AREA: 14.9083 SQ IN.

RECORD NUMBER	AREA OR OBJECT	CHARACTERISTIC	COLOR	POLYGON AREA (SQ IN.)	PERCENTAGE OF AREA	POLYGON PERIMETER (INCHES)
2	Sky	None	Gray	1.5012	10.07	8.8911
3	Trees	Leaves Off	Brown	2.8875	19.37	9.6661
4	Grass	Short Field	Tan	10.5196	70.56	13.2320

NUMBER OF POLYGONS: 3

DIFFERENT TYPES OF OBJECTS: 3

PERCENTAGE OF AREA FOR TYPE Man-Made IS 0.00%
PERCENTAGE OF AREA FOR TYPE Grass IS 70.56%
PERCENTAGE OF AREA FOR TYPE Trees IS 19.37%
PERCENTAGE OF AREA FOR TYPE Road IS 0.00%
PERCENTAGE OF AREA FOR TYPE Water IS 0.00%
PERCENTAGE OF AREA FOR TYPE Sky IS 10.07%
PERCENTAGE OF AREA FOR TYPE Soil IS 0.00%
PERCENTAGE OF AREA FOR TYPE Mountain IS 0.00%

TOTAL EDGE LENGTH: 8.1723 IN.

LINEAR EDGES BETWEEN TYPES (INCHES)

	Man-Made	Grass	Trees	Road	Water	Sky	Soil	Mountain
Man-Made	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Grass	0.0000	0.0000	3.8667	0.0000	0.0000	0.0000	0.0000	0.0000
Trees	0.0000	3.8667	0.0000	0.0000	0.0000	4.3056	0.0000	0.0000
Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Sky	0.0000	0.0000	4.3056	0.0000	0.0000	0.0000	0.0000	0.0000
Soil	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mountain	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

NUMBER OF VEHICLES: 0

GREEN VEGETATION PRESENT: NO

(Continued)

Table C4 (Continued)

Scene #2 - March TOTAL AREA: 14.8807 SQ IN.

RECORD NUMBER	AREA OR OBJECT	CHARACTERISTIC	COLOR	POLYGON AREA (SQ IN.)	PERCENTAGE OF AREA	POLYGON PERIMETER (INCHES)
2	Sky	None	Gray	0.6496	4.37	8.2235
3	Trees	Leaves Off	Brown	3.3459	22.48	9.6197
4	Grass	Short Field	Tan	10.3553	69.59	23.1554
5	Man-Made	Sign	White	0.0023	0.02	0.1832
6	Road	Dirt	Brown	0.2428	1.63	3.8343
7	Road	Dirt	Brown	0.2849	1.91	6.2578

NUMBER OF POLYGONS: 6

DIFFERENT TYPES OF OBJECTS: 5

PERCENTAGE OF AREA FOR TYPE Man-Made IS 0.02%
PERCENTAGE OF AREA FOR TYPE Grass IS 69.59%
PERCENTAGE OF AREA FOR TYPE Trees IS 22.48%
PERCENTAGE OF AREA FOR TYPE Road IS 3.55%
PERCENTAGE OF AREA FOR TYPE Water IS 0.00%
PERCENTAGE OF AREA FOR TYPE Sky IS 4.37%
PERCENTAGE OF AREA FOR TYPE Soil IS 0.00%
PERCENTAGE OF AREA FOR TYPE Mountain IS 0.00%

TOTAL EDGE LENGTH: 17.9210 IN.

LINEAR EDGES BETWEEN TYPES (INCHES)

	Man-Made	Grass	Trees	Road	Water	Sky	Soil	Mountain
Man-Made	0.0000	0.0479	0.1353	0.0000	0.0000	0.0000	0.0000	0.0000
Grass	0.0479	0.0000	3.7905	9.9438	0.0000	0.0000	0.0000	0.0000
Trees	0.1353	3.7905	0.0000	0.0000	0.0000	4.0035	0.0000	0.0000
Road	0.0000	9.9438	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Sky	0.0000	0.0000	4.0035	0.0000	0.0000	0.0000	0.0000	0.0000
Soil	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mountain	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

NUMBER OF VEHICLES: 0

GREEN VEGETATION PRESENT: NO

(Continued)

Table C4 (Continued)

Scene #3 - March TOTAL AREA: 14.9047 SQ IN.

RECORD NUMBER	AREA OR OBJECT	CHARACTERISTIC	COLOR	POLYGON AREA (SQ IN.)	PERCENTAGE OF AREA	POLYGON PERIMETER (INCHES)
2	Sky	None	Gray	1.4108	9.47	8.8050
3	Trees	Leaves Off	Brown	2.9479	19.78	11.1152
4	Man-Made	Metal Pole	Silver	0.0155	0.10	0.7120
5	Man-Made	Unknown	White	0.0121	0.08	0.4583
6	Man-Made	Unknown	Silver	0.0080	0.05	0.3571
7	Man-Made	Metal Pole	Silver	0.0033	0.02	0.2565
8	Grass	Short Field	Tan	0.9131	6.13	8.2609
9	Man-Made	Unknown	White	0.0021	0.01	0.1799
10	Road	Gravel	Gray	0.1366	0.92	7.7272
11	Grass	Short Field	Tan	3.9030	26.19	10.2019
12	Man-Made	Target	Black	0.0257	0.17	0.6514
13	Road	Dirt	Brown	1.0206	6.85	8.2629
14	Grass	Short Field	Tan	4.5061	30.23	10.1800

NUMBER OF POLYGONS: 13

DIFFERENT TYPES OF OBJECTS: 5

PERCENTAGE OF AREA FOR TYPE Man-Made IS 0.45%
PERCENTAGE OF AREA FOR TYPE Grass IS 62.55%
PERCENTAGE OF AREA FOR TYPE Trees IS 19.78%
PERCENTAGE OF AREA FOR TYPE Road IS 7.76%
PERCENTAGE OF AREA FOR TYPE Water IS 0.00%
PERCENTAGE OF AREA FOR TYPE Sky IS 9.47%
PERCENTAGE OF AREA FOR TYPE Soil IS 0.00%
PERCENTAGE OF AREA FOR TYPE Mountain IS 0.00%

TOTAL EDGE LENGTH: 25.8619 IN.

LINEAR EDGES BETWEEN TYPES (INCHES)

	Man-Made	Grass	Trees	Road	Water	Sky	Soil	Mountain
Man-Made	0.0000	0.7674	1.6974	0.1503	0.0000	0.0000	0.0000	0.0000
Grass	0.7674	0.0000	3.6070	15.3672	0.0000	0.0000	0.0000	0.0000
Trees	1.6974	3.6070	0.0000	0.0000	0.0000	4.2726	0.0000	0.0000
Road	0.1503	15.3672	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Sky	0.0000	0.0000	4.2726	0.0000	0.0000	0.0000	0.0000	0.0000
Soil	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mountain	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

NUMBER OF VEHICLES: 0

GREEN VEGETATION PRESENT: NO

(Continued)

Table C4 (Continued)

Scene #4 - March TOTAL AREA: 14.9083 SQ IN.

RECORD NUMBER	AREA OR OBJECT	CHARACTERISTIC	COLOR	POLYGON AREA (SQ IN.)	PERCENTAGE OF AREA	POLYGON PERIMETER (INCHES)
2	Sky	None	Gray	0.8317	5.5P	8.1951
3	Trees	Leaves Off	Brown	2.8014	18.79	9.4535
4	Grass	Short Field	Tan	1.2660	8.49	8.3030
5	Man-Made	Vehicle	Brown	0.0146	0.1	0.5222
6	Road	Gravel	Gray	0.2090	1.40	7.7590
7	Grass	Short Field	Tan	6.3108	42.33	10.9764
8	Road	Dirt	Brown	0.6695	4.49	8.1268
9	Grass	Short Field	Tan	2.8053	18.82	9.1392

NUMBER OF POLYGONS: 8

DIFFERENT TYPES OF OBJECTS: 5

PERCENTAGE OF AREA FOR TYPE Man-Made IS 0.1%
PERCENTAGE OF AREA FOR TYPE Grass IS 69.64%
PERCENTAGE OF AREA FOR TYPE Trees IS 18.79%
PERCENTAGE OF AREA FOR TYPE Road IS 5.89%
PERCENTAGE OF AREA FOR TYPE Water IS 0.00%
PERCENTAGE OF AREA FOR TYPE Sky IS 5.58%
PERCENTAGE OF AREA FOR TYPE Soil IS 0.00%
PERCENTAGE OF AREA FOR TYPE Mountain IS 0.00%

TOTAL EDGE LENGTH: 23.5143 IN.

LINEAR EDGES BETWEEN TYPES (INCHES)

	Man-Made	Grass	Trees	Road	Water	Sky	Soil	Mountain
Man-Made	0.0000	0.1889	0.3333	0.0000	0.0000	0.0000	0.0000	0.0000
Grass	0.1889	0.0000	3.6371	15.3764	0.0000	0.0000	0.0000	0.0000
Trees	0.3333	3.6371	0.0000	0.0000	0.0000	3.9787	0.0000	0.0000
Road	0.0000	15.3764	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Sky	0.0000	0.0000	3.9787	0.0000	0.0000	0.0000	0.0000	0.0000
Soil	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mountain	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

NUMBER OF VEHICLES: 1

GREEN VEGETATION PRESENT: NO

(Continued)

Table C4 (Continued)

Scene #5 - March TOTAL AREA: 14.9143 SQ IN.

RECORD NUMBER	AREA OR OBJECT	CHARACTERISTIC	COLOR	POLYGON AREA (SQ IN.)	PERCENTAGE OF AREA	POLYGON PERIMETER (INCHES)
2	Sky	None	Gray	1.0557	7.08	8.3078
3	Trees	Leaves Off	Brown	2.7080	18.16	9.4403
4	Grass	Bushy Area	Brown	0.1594	1.07	3.6203
5	Grass	Short Field	Tan	9.2001	61.69	26.8435
6	Road	Gravel	Gray	0.1198	0.80	2.8001
7	Road	Gravel	Gray	0.1849	1.24	6.8631
8	Road	Dirt	Brown	0.2311	1.55	4.8801
9	Road	Dirt	Tan	0.5779	3.87	6.7794
10	Grass	Short Field	Tan	0.6773	4.54	5.2882

NUMBER OF POLYGONS: 9

DIFFERENT TYPES OF OBJECTS: 4

PERCENTAGE OF AREA FOR TYPE Man-Made IS 0.00%
PERCENTAGE OF AREA FOR TYPE Grass IS 67.30%
PERCENTAGE OF AREA FOR TYPE Trees IS 18.16%
PERCENTAGE OF AREA FOR TYPE Road IS 7.47%
PERCENTAGE OF AREA FOR TYPE Water IS 0.00%
PERCENTAGE OF AREA FOR TYPE Sky IS 7.08%
PERCENTAGE OF AREA FOR TYPE Soil IS 0.00%
PERCENTAGE OF AREA FOR TYPE Mountain IS 0.00%

TOTAL EDGE LENGTH: 29.6876 IN.

LINEAR EDGES BETWEEN TYPES (INCHES)

	Man-Made	Grass	Trees	Road	Water	Sky	Soil	Mountain
Man-Made	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Grass	0.0000	1.7094	3.9256	20.0081	0.0000	0.0000	0.0000	0.0000
Trees	0.0000	3.9256	0.0000	0.0000	0.0000	4.0444	0.0000	0.0000
Road	0.0000	20.0081	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Sky	0.0000	0.0000	4.0444	0.0000	0.0000	0.0000	0.0000	0.0000
Soil	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mountain	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

NUMBER OF VEHICLES: 0

GREEN VEGETATION PRESENT: NO

(Continued)

Table C4 (Continued)

Scene #6 - March TOTAL AREA: 14.8447 SQ IN.

RECORD NUMBER	AREA OR OBJECT	CHARACTERISTIC	COLOR	POLYGON AREA (SQ IN.)	PERCENTAGE OF AREA	POLYGON PERIMETER (INCHES)
2	Sky	None	Gray	0.9631	6.49	8.9994
3	Man-Made	Metal Pole	Silver	0.0117	0.08	0.5480
4	Trees	Leaves Off	Brown	2.5582	17.23	9.3893
5	Grass	Short Field	Tan	0.7167	4.83	8.2810
6	Road	Gravel	Gray	0.1233	0.83	7.7512
7	Grass	Short Field	Tan	9.4993	63.99	12.6399
8	Man-Made	Vehicle	Brown	0.0078	0.05	0.3674
9	Road	Dirt	Brown	0.4796	3.23	7.4804
10	Grass	Short Field	Tan	0.4850	3.27	5.2180

NUMBER OF POLYGONS: 9

DIFFERENT TYPES OF OBJECTS: 5

PERCENTAGE OF AREA FOR TYPE Man-Made IS 0.13%
PERCENTAGE OF AREA FOR TYPE Grass IS 72.09%
PERCENTAGE OF AREA FOR TYPE Trees IS 17.23%
PERCENTAGE OF AREA FOR TYPE Road IS 4.06%
PERCENTAGE OF AREA FOR TYPE Water IS 0.00%
PERCENTAGE OF AREA FOR TYPE Sky IS 6.49%
PERCENTAGE OF AREA FOR TYPE Soil IS 0.00%
PERCENTAGE OF AREA FOR TYPE Mountain IS 0.00%

TOTAL EDGE LENGTH: 22.6313 IN.

LINEAR EDGES BETWEEN TYPES (INCHES)

	Man-Made	Grass	Trees	Road	Water	Sky	Soil	Mountain
Man-Made	0.0000	0.2795	0.1426	0.0000	0.0000	0.4933	0.0000	0.0000
Grass	0.2795	0.0000	3.7604	13.7983	0.0000	0.0000	0.0000	0.0000
Trees	0.1426	3.7604	0.0000	0.0000	0.0000	4.1572	0.0000	0.0000
Road	0.0000	13.7983	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Sky	0.4933	0.0000	4.1572	0.0000	0.0000	0.0000	0.0000	0.0000
Soil	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mountain	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

NUMBER OF VEHICLES: 1

GREEN VEGETATION PRESENT: NO

(Continued)

Table C4 (Continued)

Scene #7 - March TOTAL AREA: 14.8597 SQ IN.

RECORD NUMBER	AREA OR OBJECT	CHARACTERISTIC	COLOR	POLYGON AREA (SQ IN.)	PERCENTAGE OF AREA	POLYGON PERIMETER (INCHES)
2	Sky	None	Gray	1.3693	9.22	8.5026
3	Trees	Leaves Off	Brown	2.3447	15.78	9.0630
4	Grass	Bushy Area	Brown	0.1821	1.23	4.5217
5	Grass	Short Field	Tan	0.3168	2.13	8.0362
6	Man-Made	Vehicle	Brown	0.0152	0.10	0.5522
7	Road	Gravel	Gray	0.1713	1.15	7.7764
8	Grass	Short Field	Tan	10.4602	70.39	13.1423

NUMBER OF POLYGONS: 7

DIFFERENT TYPES OF OBJECTS: 5

PERCENTAGE OF AREA FOR TYPE Man-Made IS 0.10%
PERCENTAGE OF AREA FOR TYPE Grass IS 73.75%
PERCENTAGE OF AREA FOR TYPE Trees IS 15.78%
PERCENTAGE OF AREA FOR TYPE Road IS 1.15%
PERCENTAGE OF AREA FOR TYPE Water IS 0.00%
PERCENTAGE OF AREA FOR TYPE Sky IS 9.22%
PERCENTAGE OF AREA FOR TYPE Soil IS 0.00%
PERCENTAGE OF AREA FOR TYPE Mountain IS 0.00%

TOTAL EDGE LENGTH: 18.0867 IN.

LINEAR EDGES BETWEEN TYPES (INCHES)

	Man-Made	Grass	Trees	Road	Water	Sky	Soil	Mountain
Man-Made	0.0000	0.5522	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Grass	0.5522	2.0477	3.8336	7.6734	0.0000	0.0000	0.0000	0.0000
Trees	0.0000	3.8336	0.0000	0.0000	0.0000	3.9798	0.0000	0.0000
Road	0.0000	7.6734	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Sky	0.0000	0.0000	3.9798	0.0000	0.0000	0.0000	0.0000	0.0000
Soil	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mountain	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

NUMBER OF VEHICLES: 1

GREEN VEGETATION PRESENT: NO

(Continued)

Table C4 (Continued)

Scene #8 - March TOTAL AREA: 14.8416 SQ IN.

RECORD NUMBER	AREA OR OBJECT	CHARACTERISTIC	COLOR	POLYGON AREA (SQ IN.)	PERCENTAGE OF AREA	POLYGON PERIMETER (INCHES)
2	Sky	None	Gray	1.7356	11.69	8.6914
3	Trees	Leaves Off	Brown	1.9928	13.43	8.9601
4	Grass	Short Field	Tan	2.2693	15.29	15.147
5	Grass	Bushy Area	Brown	0.0815	0.55	1.7920
6	Man-Made	Vehicle	Brown	0.0109	0.07	0.4900
7	Man-Made	Vehicle	Brown	0.0077	0.05	0.3411
8	Grass	Bushy Area	Brown	0.1659	1.12	3.6817
9	Road	Pavement	Gray	0.1462	0.99	7.7149
10	Grass	Short Field	Tan	8.4317	56.81	12.0180

NUMBER OF POLYGONS: 9

DIFFERENT TYPES OF OBJECTS: 5

PERCENTAGE OF AREA FOR TYPE Man-Made IS 0.13%
PERCENTAGE OF AREA FOR TYPE Grass IS 73.77%
PERCENTAGE OF AREA FOR TYPE Trees IS 13.43%
PERCENTAGE OF AREA FOR TYPE Road IS 0.99%
PERCENTAGE OF AREA FOR TYPE Water IS 0.00%
PERCENTAGE OF AREA FOR TYPE Sky IS 11.69%
PERCENTAGE OF AREA FOR TYPE Soil IS 0.00%
PERCENTAGE OF AREA FOR TYPE Mountain IS 0.00%

TOTAL EDGE LENGTH: 21.7126 IN.

LINEAR EDGES BETWEEN TYPES (INCHES)

	Man-Made	Grass	Trees	Road	Water	Sky	Soil	Mountain
Man-Made	0.0000	0.8311	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Grass	0.8311	5.3818	3.8427	7.6397	0.0000	0.0000	0.0000	0.0000
Trees	0.0000	3.8427	0.0000	0.0000	0.0000	4.0173	0.0000	0.0000
Road	0.0000	7.6397	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Sky	0.0000	0.0000	4.0173	0.0000	0.0000	0.0000	0.0000	0.0000
Soil	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mountain	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

NUMBER OF VEHICLES: 2

GREEN VEGETATION PRESENT: NO

(Continued)

Table C4 (Continued)

Scene #9 - March TOTAL AREA: 14.8537 SQ IN.

RECORD NUMBER	AREA OR OBJECT	CHARACTERISTIC	COLOR	POLYGON AREA (SQ IN.)	PERCENTAGE OF AREA	POLYGON PERIMETER (INCHES)
2	Sky	None	Gray	1.7862	12.03	8.7365
3	Trees	Leaves Off	Brown	1.4429	9.71	8.9082
4	Grass	Short Field	Tan	1.1884	8.00	15.2926
5	Grass	Bushy Area	Brown	0.0505	0.34	1.0137
6	Man-Made	Vehicle	Brown	0.0072	0.05	0.4089
7	Grass	Bushy Area	Brown	0.1044	0.70	2.9234
8	Man-Made	Vehicle	Brown	0.0304	0.20	0.7192
9	Man-Made	Vehicle	Brown	0.0028	0.02	0.2361
10	Grass	Bushy Area	Brown	0.7503	5.05	11.3708
11	Grass	Short Field	Tan	1.3154	8.86	9.4361
12	Road	Pavement	Gray	0.3128	2.11	7.8866
13	Grass	Short Field	Tan	7.8621	52.93	11.7013

NUMBER OF POLYGONS: 12

DIFFERENT TYPES OF OBJECTS: 5

PERCENTAGE OF AREA FOR TYPE Man-Made IS 0.27%
PERCENTAGE OF AREA FOR TYPE Grass IS 75.88%
PERCENTAGE OF AREA FOR TYPE Trees IS 9.71%
PERCENTAGE OF AREA FOR TYPE Road IS 2.11%
PERCENTAGE OF AREA FOR TYPE Water IS 0.00%
PERCENTAGE OF AREA FOR TYPE Sky IS 12.03%
PERCENTAGE OF AREA FOR TYPE Soil IS 0.00%
PERCENTAGE OF AREA FOR TYPE Mountain IS 0.00%

TOTAL EDGE LENGTH: 31.6077 IN.

LINEAR EDGES BETWEEN TYPES (INCHES)

	Man-Made	Grass	Trees	Road	Water	Sky	Soil	Mountain
Man-Made	0.0000	1.2851	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Grass	1.2851	14.5777	3.9931	7.6750	0.0000	0.0000	0.0000	0.0000
Trees	0.0000	3.9931	0.0000	0.0000	0.0000	4.0769	0.0000	0.0000
Road	0.0000	7.6750	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Sky	0.0000	0.0000	4.0769	0.0000	0.0000	0.0000	0.0000	0.0000
Soil	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mountain	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

NUMBER OF VEHICLES: 3

GREEN VEGETATION PRESENT: NO

(Continued)

Table C4 (Continued)

Scene #10 - March TOTAL AREA: 14.8293 SQ IN.

RECORD NUMBER	AREA OR OBJECT	CHARACTERISTIC	COLOR	POLYGON AREA (SQ IN.)	PERCENTAGE OF AREA	POLYGON PERIMETER (INCHES)
2	Sky	None	Gray	2.0703	13.96	9.0212
3	Trees	Leaves Off	Brown	1.3380	9.02	8.5509
4	Grass	Short Field	Tan	10.5646	71.24	25.7608
5	Grass	Bushy Area	Brown	0.2740	1.85	3.4433
6	Grass	Bushy Area	Brown	0.1599	1.08	2.6531
7	Road	Pavement	Gray	0.4225	2.85	6.8048

NUMBER OF POLYGONS: 6

DIFFERENT TYPES OF OBJECTS: 4

PERCENTAGE OF AREA FOR TYPE Man-Made IS 0.00%
PERCENTAGE OF AREA FOR TYPE Grass IS 74.17%
PERCENTAGE OF AREA FOR TYPE Trees IS 9.02%
PERCENTAGE OF AREA FOR TYPE Road IS 2.85%
PERCENTAGE OF AREA FOR TYPE Water IS 0.00%
PERCENTAGE OF AREA FOR TYPE Sky IS 13.96%
PERCENTAGE OF AREA FOR TYPE Soil IS 0.00%
PERCENTAGE OF AREA FOR TYPE Mountain IS 0.00%

TOTAL EDGE LENGTH: 20.4147 IN.

LINEAR EDGES BETWEEN TYPES (INCHES)

	Man-Made	Grass	Trees	Road	Water	Sky	Soil	Mountain
Man-Made	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Grass	0.0000	5.8179	3.8338	6.6731	0.0000	0.0000	0.0000	0.0000
Trees	0.0000	3.8338	0.0000	0.0000	0.0000	4.0899	0.0000	0.0000
Road	0.0000	6.6731	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Sky	0.0000	0.0000	4.0899	0.0000	0.0000	0.0000	0.0000	0.0000
Soil	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mountain	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

NUMBER OF VEHICLES: 0

GREEN VEGETATION PRESENT: NO

(Continued)

Table C4 (Concluded)

Scene #11 - March TOTAL AREA: 14.9278 SQ IN.

RECORD NUMBER	AREA OR OBJECT	CHARACTERISTIC	COLOR	POLYGON AREA (SQ IN.)	PERCENTAGE OF AREA	POLYGON PERIMETER (INCHES)
2	Sky	None	Gray	1.4524	9.73	7.6482
3	Trees	Leaves Off	Brown	4.8989	32.82	13.3416
4	Grass	Short Field	Tan	7.8646	52.68	17.9278
5	Man-Made	Vehicle	Brown	0.0176	0.12	0.5346
6	Man-Made	Telephone Pole	Brown	0.0528	0.35	2.2734
7	Road	Dirt	Sandy	0.6415	4.30	5.6398

NUMBER OF POLYGONS: 6

DIFFERENT TYPES OF OBJECTS: 5

PERCENTAGE OF AREA FOR TYPE Man-Made IS 0.47%
PERCENTAGE OF AREA FOR TYPE Grass IS 52.68%
PERCENTAGE OF AREA FOR TYPE Trees IS 32.82%
PERCENTAGE OF AREA FOR TYPE Road IS 4.30%
PERCENTAGE OF AREA FOR TYPE Water IS 0.00%
PERCENTAGE OF AREA FOR TYPE Sky IS 9.73%
PERCENTAGE OF AREA FOR TYPE Soil IS 0.00%
PERCENTAGE OF AREA FOR TYPE Mountain IS 0.00%

TOTAL EDGE LENGTH: 15.9543 IN.

LINEAR EDGES BETWEEN TYPES (INCHES)

	Man-Made	Grass	Trees	Road	Water	Sky	Soil	Mountain
Man-Made	0.0000	2.8080	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Grass	2.8080	0.0000	3.4320	3.4571	0.0000	0.0000	0.0000	0.0000
Trees	0.0000	3.4320	0.0000	2.1210	0.0000	4.1361	0.0000	0.0000
Road	0.0000	3.4571	2.1210	0.0000	0.0000	0.0000	0.0000	0.0000
Water	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Sky	0.0000	0.0000	4.1361	0.0000	0.0000	0.0000	0.0000	0.0000
Soil	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mountain	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

NUMBER OF VEHICLES: 1

GREEN VEGETATION PRESENT: NO

Appendix D
Eglin Air Force Base (AFB), FL

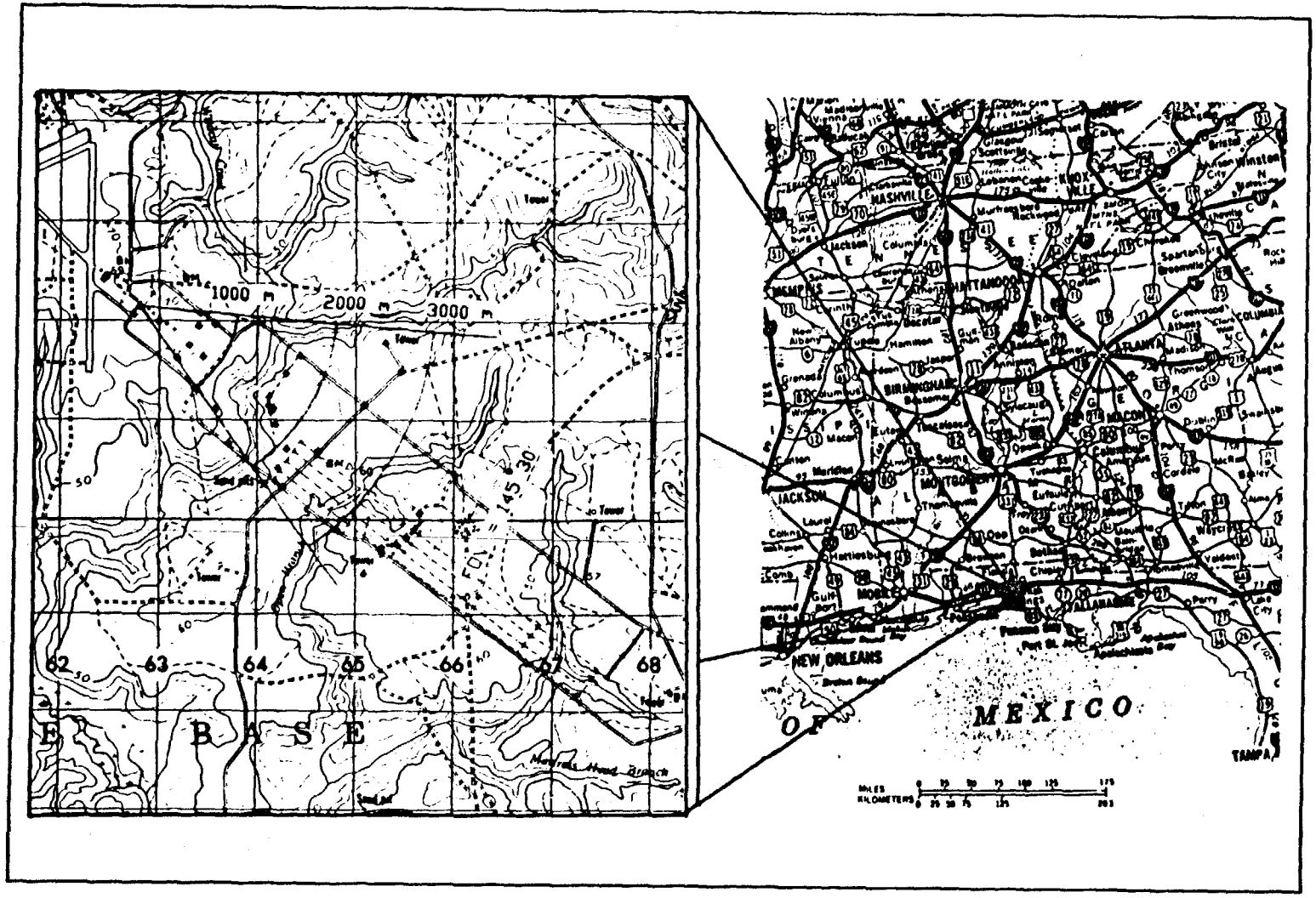
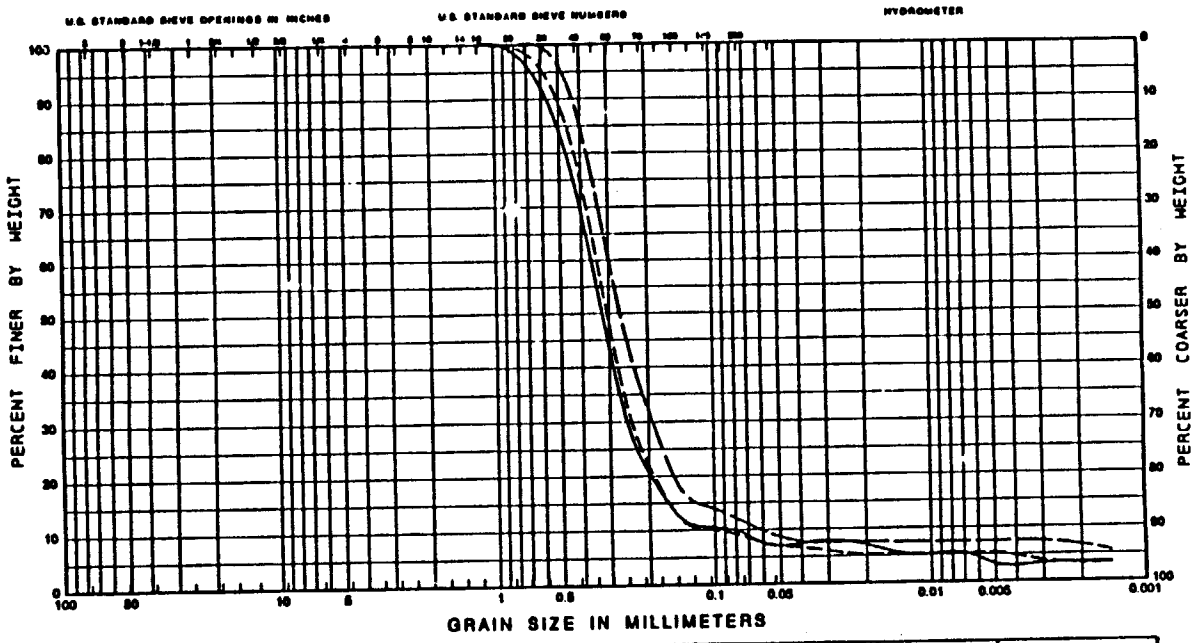


Figure D1. Site location and ground truth locations

GRAIN SIZE CURVES



GRAVEL	SAND			SILT	CLAY
	Course	Medium	Fine		

BORING NO.	SAMPLE NO.	Curve	CLASSIFICATION	WATER CONTENT %	ATTERBERG LIMITS LL	PL	PI	UNCONFINED COMPRESSION STRESS	STRAIN %	UNIT DRY WEIGHT	EROSIO-BILITY	RECOMMEND. REMARKS
			NP = Non Plastic									
	1	———	Tan fine sand (SP)		NP	NP	NP					
	2	——·—·	Tan fine sand (SP)		NP	NP	NP					
	3	– – – –	Tan fine sand (SP)		NP	NP	NP					

Figure D2. Soils laboratory report

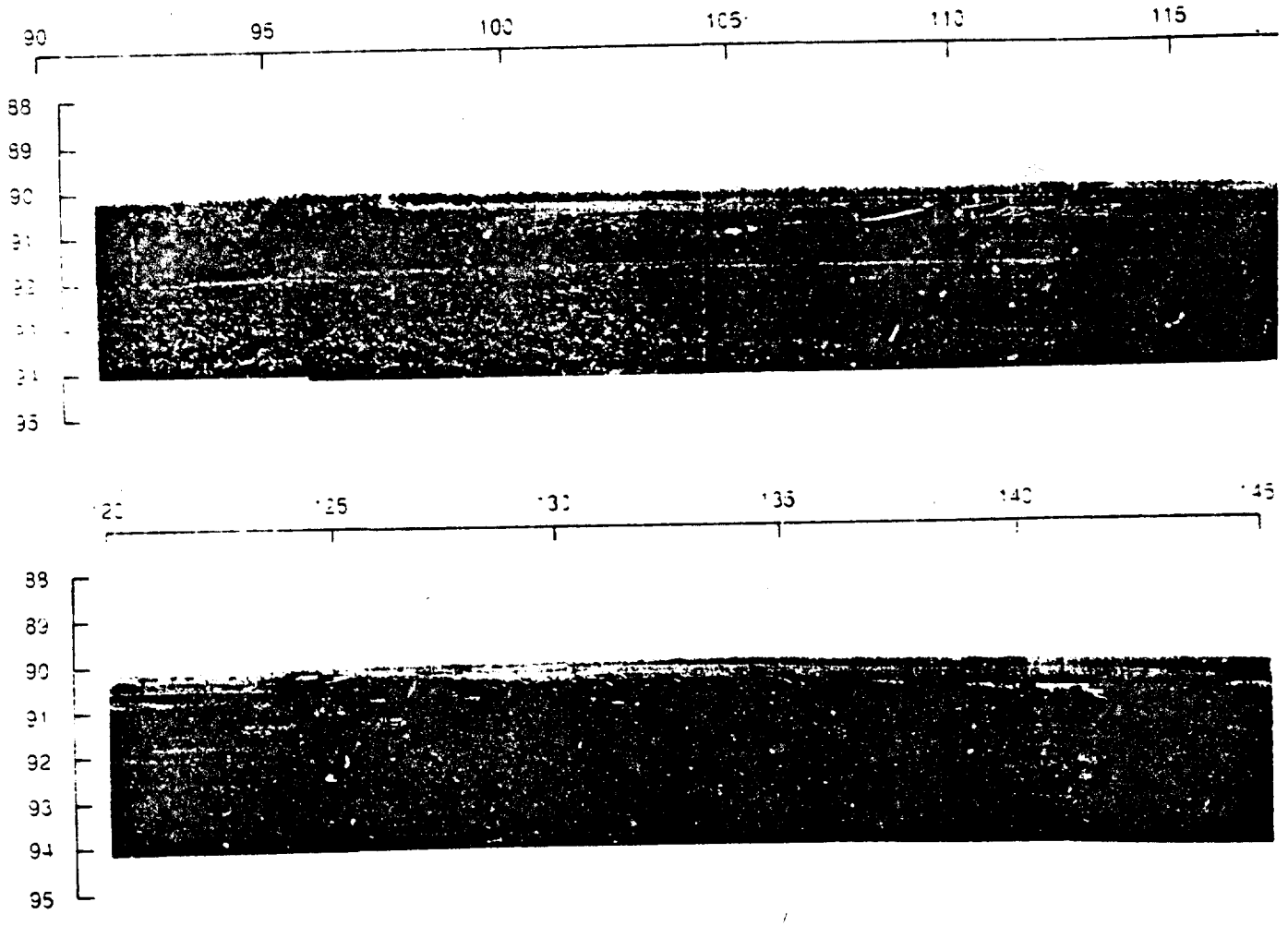
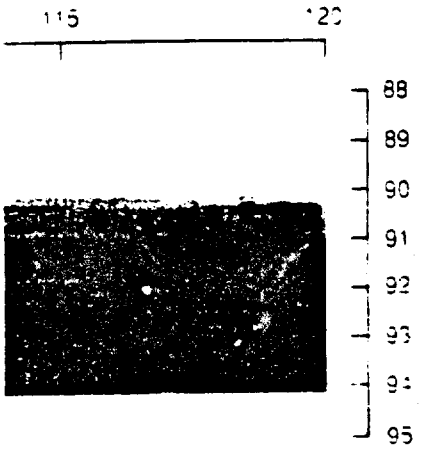
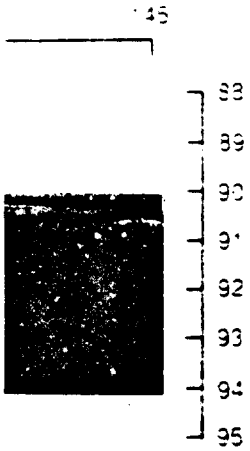


Figure D3. Mosaic photography


115
120
88
89
90
91
92
93
94
95


145
88
89
90
91
92
93
94
95

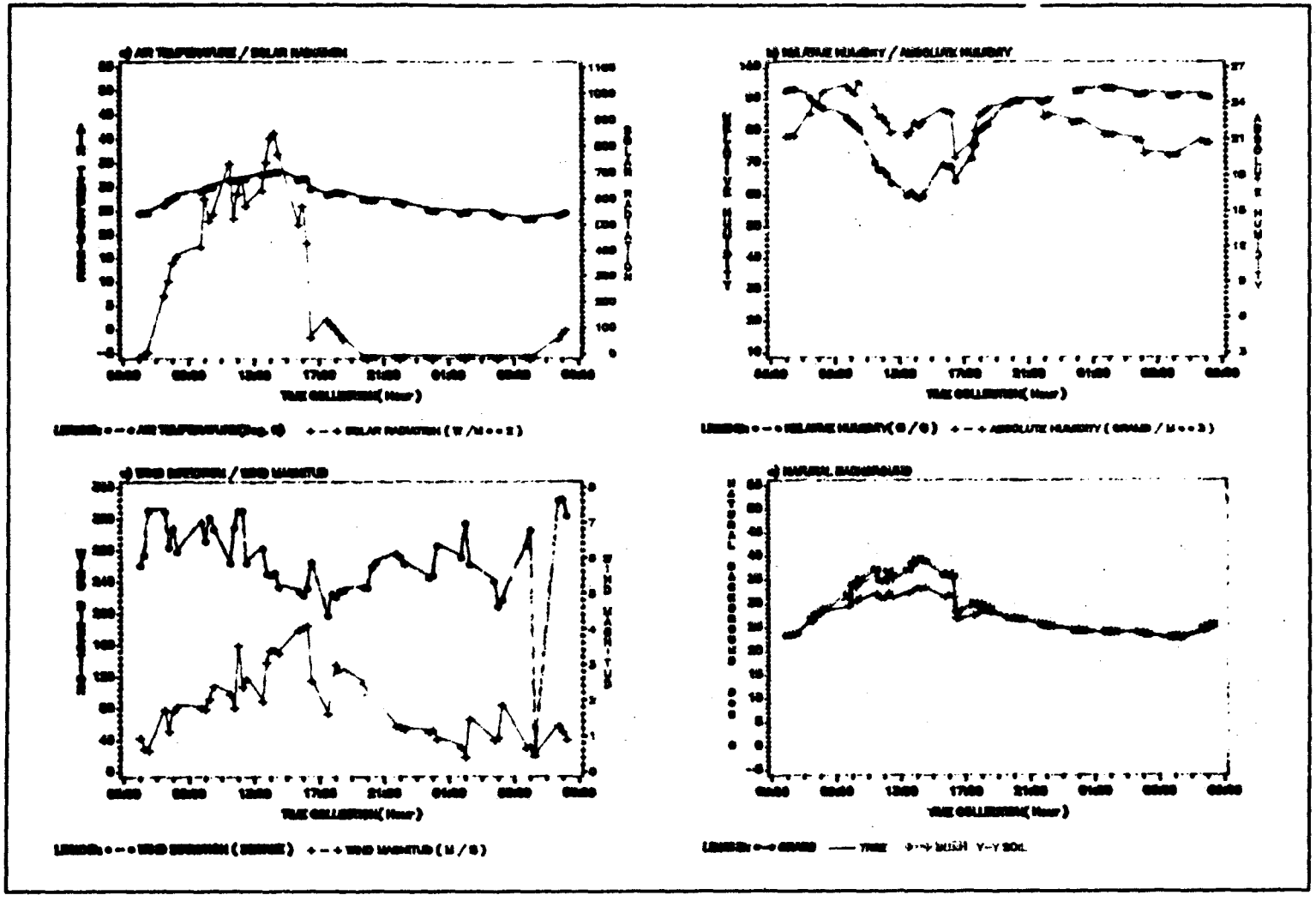


Figure D4. Diurnal meterological summary, 10-11 August 1991

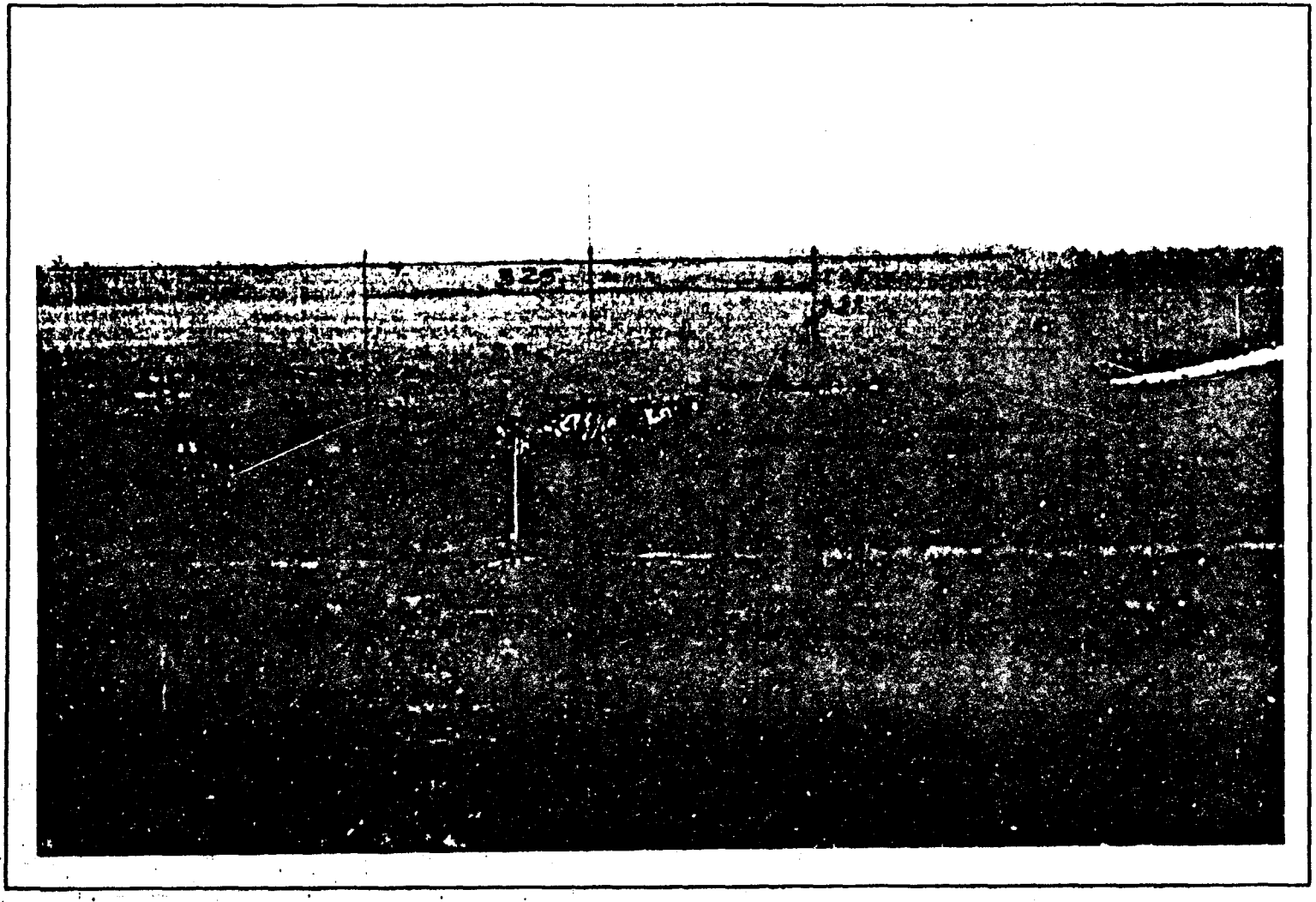


Figure D5. Photointerpretation of scene #5

Table D1
Topographic Survey and Sampling Locations at EGL

TYPE OF MEASUREMENT	VIEW	AZIMUTH ANGLE	ELEVATION ANGLE	SURVEYED RANGE (M)	PASSIVE RANGE (M)	UTM EASTING	UTM NORTHING	ELEVATION (M)
camera pointing angle	1	95.000	91.500	.	340	.	.	.
camera pointing angle	2	97.500	91.500	.	340	.	.	.
camera pointing angle	3	100.000	91.500	.	340	.	.	.
camera pointing angle	4	102.500	91.500	.	340	.	.	.
camera pointing angle	5	105.000	91.500	.	340	.	.	.
camera pointing angle	6	107.500	91.500	.	340	.	.	.
camera pointing angle	7	110.000	91.500	.	340	.	.	.
camera pointing angle	8	112.500	91.500	.	340	.	.	.
camera pointing angle	9	115.000	91.500	.	340	.	.	.
camera pointing angle	10	117.500	91.500	.	340	.	.	.
camera pointing angle	11	120.000	91.500	.	340	.	.	.
camera pointing angle	12	122.500	91.500	.	340	.	.	.
camera pointing angle	13	125.000	91.500	.	720	.	.	.
camera pointing angle	14	127.500	91.500	.	720	.	.	.
camera pointing angle	15	130.000	91.500	.	720	.	.	.
camera pointing angle	16	132.500	91.500	.	720	.	.	.
camera pointing angle	17	135.000	91.500	.	720	.	.	.
camera pointing angle	18	137.500	91.500	.	720	.	.	.
camera pointing angle	19	140.000	91.500	.	720	.	.	.
camera pointing angle	20	142.500	91.500	.	720	.	.	.
surveyed point	.	96.900	91.600	617.51	.	63434.58	92118.88	66.50
surveyed point	.	99.030	90.350	2525.63	.	65316.17	91796.88	68.36
surveyed point	.	104.250	91.630	797.38	.	63591.57	91997.67	61.18
surveyed point	.	104.320	90.400	2745.66	.	65481.97	91514.10	64.51
surveyed point	.	107.800	90.880	1707.01	.	64447.95	91671.03	57.53
surveyed point	.	109.530	91.680	632.11	.	63418.02	91981.69	65.21
surveyed point	.	114.300	90.480	2491.03	.	65092.63	91168.10	63.05
surveyed point	.	114.990	91.017	1641.41	.	64309.26	91499.85	54.82
surveyed point	.	118.630	90.370	3642.71	.	66018.90	90448.26	60.20
surveyed point	.	125.669	90.900	1607.91	.	64127.69	91256.01	58.37
surveyed point	.	126.790	90.270	3546.79	.	65662.21	90069.19	66.85
surveyed point	.	127.850	90.780	1711.09	.	64173.75	91142.85	60.59
surveyed point	.	128.250	90.800	1657.63	.	64123.89	91167.18	60.51
surveyed point	.	128.860	91.730	642.99	.	63322.08	91790.36	64.38
surveyed point	.	129.340	90.740	1721.91	.	64153.39	91102.01	61.59
surveyed point	.	129.460	90.420	3601.85	.	65602.40	89904.46	57.06

(Continued)

Table D1 (Concluded)

TYPE OF MEASUREMENT	VIEW	AZIMUTH ANGLE	ELEVATION ANGLE	SURVEYED RANGE (M)	PASSIVE RANGE (M)	UTM EASTIN	UTM NORTHING	ELEVATION (M)
surveyed point	.	129.460	91.450	823.01	.	63457.88	91670.00	62.91
surveyed point	.	129.720	90.580	2339.19	.	64621.63	90697.99	60.04
surveyed point	.	130.330	93.950	245.01	.	63008.49	92035.08	66.90
surveyed point	.	131.440	90.500	3603.41	.	65523.36	89808.60	52.24
surveyed point	.	131.610	90.740	1835.50	.	64194.61	90974.35	59.96
surveyed point	.	133.450	90.460	3569.73	.	65413.73	89738.56	54.89
surveyed point	.	134.780	90.680	2089.19	.	64305.26	90721.79	58.90
surveyed point	.	135.550	90.490	3485.91	.	65262.74	89705.64	54.18
surveyed point	.	139.020	90.610	3038.69	.	64814.71	89899.48	51.34
surveyed point	.	140.120	90.630	2179.10	.	64219.54	90520.68	59.72
surveyed point	.	140.940	90.490	3580.19	.	65078.34	89413.22	52.94
surveyed point	.	142.410	90.660	2343.71	.	64251.67	90336.31	56.93
surveyed point	.	142.910	90.700	2263.09	.	64187.06	90388.19	56.07
surveyed point	.	144.480	91.270	1304.59	.	63579.93	91131.98	54.81
surveyed point	.	145.390	91.950	658.09	.	63195.94	91651.83	61.41
surveyed point	.	146.400	91.480	1017.32	.	63385.36	91345.86	57.47
surveyed point	.	147.710	91.120	1668.52	.	63713.20	90783.39	51.26
soil sample #1						65078.34	89413.22	52.94
soil sample #2						63008.49	92035.08	66.90
soil sample #3						64447.95	91671.03	57.53
camera position						62822.49	92192.97	83.75

Table D2
Vegetation and Soil Moisture Data

Vegetation	
	August (Dormant)
Trees: deciduous coniferous	4.0 to 6.0 m 14 to 16 m
Grass: tall short	None 0.2 m
Scrub/Bushes	0.9 to 1.2 m
Soil Moisture	
	August
Location	1 2 3
% Moisture	9.0% 6.0% 6.0%

Table D3
Meterological and Radiometric Data

DAY AND TIME OF COLLECTION	VISITED SITE	AIR TEMP. (C)	SOLAR RADIATION (W/M**2)	WIND MAGNITUD (M/S)	WIND DIRECTION (DEGREES)	RELATIVE HUMIDITY (PERCENT)	BCKGND GRASS (C)	BCKGND BUSH (C)	BCKGND TREE (C)	BCKGND SOIL (C)	BCKGND ROAD (C)
09AUG91:12:00	EGL	.	.	.	.	.	32.39	29.99	30.45	31.75	.
09AUG91:12:15	EGL	.	.	.	.	.	31.76	29.44	29.83	31.03	.
09AUG91:12:30	EGL	.	.	.	.	.	31.66	29.39	29.67	30.74	.
09AUG91:12:45	EGL	.	.	.	.	.	31.27	29.16	29.36	30.83	.
09AUG91:13:00	EGL	.	.	.	.	.	31.25	28.88	29.25	30.73	.
09AUG91:13:15	EGL	29.74	313.40	2.29	230.90	82.40	31.75	29.04	29.38	31.07	.
09AUG91:13:30	EGL	29.96	346.80	2.69	220.80	82.40	32.57	29.61	30.00	31.99	.
09AUG91:13:45	EGL	29.79	315.90	3.09	226.90	82.90	31.79	29.28	29.35	31.38	.
09AUG91:14:00	EGL	29.37	355.40	3.26	231.50	83.70	31.83	28.76	28.98	31.31	.
09AUG91:14:15	EGL	29.40	455.00	2.94	236.70	83.60	33.00	29.46	29.77	32.39	.
09AUG91:14:30	EGL	29.69	428.20	2.68	245.60	79.70	33.67	29.52	30.12	33.20	.
09AUG91:14:45	EGL	30.00	343.80	2.45	254.00	75.50	32.31	29.10	29.45	31.64	.
09AUG91:15:00	EGL	29.98	337.60	2.66	243.90	74.10	32.20	28.93	29.23	31.50	.
09AUG91:15:15	EGL	30.01	354.70	2.52	237.20	74.30	32.46	29.17	29.38	32.07	.
09AUG91:15:30	EGL	30.07	393.60	2.79	220.30	73.80	32.80	29.27	29.70	32.24	.
09AUG91:15:45	EGL	30.16	443.10	2.72	219.80	73.00	33.72	29.74	30.27	33.00	.
09AUG91:16:00	EGL	30.45	473.70	3.07	207.10	73.00	34.04	30.03	30.77	33.42	.
09AUG91:16:15	EGL	31.02	523.40	3.15	201.70	73.10	34.96	30.74	31.51	34.50	.
09AUG91:16:30	EGL	31.44	577.30	3.61	214.20	72.90	36.13	31.56	32.51	35.45	.
09AUG91:16:45	EGL	31.54	531.20	3.88	204.30	72.90	35.50	31.19	32.25	35.25	.
09AUG91:17:00	EGL	31.06	418.60	3.71	211.90	74.20	33.85	30.45	30.85	33.22	.
09AUG91:17:15	EGL	31.11	389.50	2.79	218.10	75.70	33.88	30.40	31.06	33.25	.
09AUG91:17:30	EGL	31.08	312.80	3.49	213.60	76.20	32.42	29.56	29.92	32.08	.
09AUG91:17:45	EGL	30.94	304.80	3.95	218.20	76.30	32.50	30.06	30.62	31.97	.
09AUG91:18:00	EGL	30.30	146.30	3.56	215.60	78.10	30.05	28.55	28.51	29.39	.
09AUG91:18:15	EGL	30.01	163.80	3.71	220.10	79.20	30.25	28.94	29.23	30.03	.
09AUG91:18:30	EGL	30.13	139.70	3.33	217.00	78.40	30.06	29.31	29.63	30.26	.
09AUG91:18:45	EGL	29.95	85.10	3.07	223.90	77.90	28.92	28.33	28.50	28.84	.
09AUG91:19:00	EGL	29.20	48.37	3.27	220.90	79.90	27.56	27.23	27.16	27.39	.
09AUG91:19:15	EGL	28.69	30.17	2.72	225.70	82.10	27.08	26.97	26.99	27.07	.
09AUG91:19:30	EGL	28.23	12.11	2.45	230.80	84.20	26.30	26.41	26.45	26.53	.
09AUG91:19:45	EGL	27.79	1.79	2.21	217.00	85.50	25.77	26.09	26.17	26.20	.
09AUG91:20:00	EGL	27.44	0.00	1.91	237.30	86.70	25.39	25.66	25.75	26.00	.
09AUG91:20:15	EGL	27.16	0.00	1.59	239.80	87.90	24.97	25.53	25.48	25.82	.
09AUG91:20:30	EGL	27.01	0.00	1.91	247.20	88.60	25.12	25.53	25.55	25.74	.
09AUG91:20:45	EGL	27.03	0.00	2.11	241.50	88.90	25.46	25.90	25.94	25.97	.
09AUG91:21:00	EGL	27.02	0.00	2.12	249.40	89.10	25.37	25.69	25.81	25.74	.
09AUG91:21:15	EGL	26.94	0.00	1.88	254.00	89.50	25.10	25.59	25.69	25.54	.
09AUG91:21:30	EGL	26.86	0.00	1.96	249.90	89.90	25.01	25.49	25.53	25.41	.
09AUG91:21:45	EGL	26.77	0.00	1.77	249.30	90.20	25.05	25.45	25.55	25.31	.
09AUG91:22:00	EGL	26.68	0.00	1.20	261.50	90.30	24.52	25.05	25.10	25.13	.
09AUG91:22:15	EGL	26.36	0.00	1.09	225.80	90.70	23.63	24.23	24.27	24.61	.
09AUG91:22:30	EGL	25.89	0.00	0.47	298.00	91.60	23.20	23.62	23.64	24.27	.
09AUG91:22:45	EGL	25.73	0.00	0.92	277.10	92.10	22.98	23.62	23.70	24.13	.
09AUG91:23:00	EGL	25.63	0.00	1.30	240.20	92.30	23.53	23.93	24.07	24.52	.
09AUG91:23:15	EGL	25.56	0.00	1.28	243.60	92.60	23.80	24.06	24.19	24.71	.
09AUG91:23:30	EGL	25.52	0.00	1.45	253.20	92.70	23.96	24.25	24.33	24.68	.
09AUG91:23:45	EGL	25.67	0.00	1.44	248.20	92.40	24.00	24.35	24.41	24.66	.
10AUG91:00:00	EGL	25.70	0.00	1.37	244.70	92.20	24.00	24.23	24.36	24.55	.
10AUG91:00:15	EGL	25.58	0.00	1.16	257.90	92.30	23.83	24.11	24.21	24.41	.
10AUG91:00:30	EGL	25.57	0.00	1.42	252.30	92.40	24.03	24.34	24.43	24.49	.

(Continued)

Table D3 (Continued)

DAY AND TIME OF COLLECTION	VISITED SITE	AIR TEMP. (C)	SOLAR RADIATION (W/M**2)	WIND MAGNITUD (M/S)	WIND DIRECTION (DEGREES)	RELATIVE HUMIDITY (PERCENT)	BCKGND GRASS (C)	BCKGND BUSH (C)	BCKGND TREE (C)	BCKGND SOIL (C)	BCKGND ROAD (C)
10AUG91:00:45	EGL	25.60	0.00	1.63	248.90	92.30	24.13	24.47	24.52	24.47	.
10AUG91:01:00	EGL	25.54	0.00	1.35	249.20	92.30	23.77	24.12	24.16	24.28	.
10AUG91:01:15	EGL	25.44	0.00	1.37	271.70	92.40	23.62	23.94	23.96	24.15	.
10AUG91:01:30	EGL	25.64	0.00	1.81	261.90	92.10	24.25	24.51	24.60	24.45	.
10AUG91:01:45	EGL	25.72	0.00	1.88	255.30	92.00	24.34	24.68	24.76	24.58	.
10AUG91:02:00	EGL	25.82	0.00	2.16	245.90	92.00	24.45	24.70	24.76	24.53	.
10AUG91:02:15	EGL	25.95	0.00	2.50	258.20	91.60	24.57	25.03	25.08	24.63	.
10AUG91:02:30	EGL	26.12	0.00	3.02	247.60	90.60	24.43	25.18	25.24	24.50	.
10AUG91:02:45	EGL	25.93	0.00	2.37	258.80	90.50	24.12	24.85	24.84	24.21	.
10AUG91:03:00	EGL	25.74	0.00	1.98	261.20	90.80	24.14	24.62	24.70	24.13	.
10AUG91:03:15	EGL	25.58	0.00	2.30	264.20	91.30	24.26	24.68	24.76	24.27	.
10AUG91:03:30	EGL	25.65	0.00	2.16	263.90	91.50	24.37	24.77	24.71	24.45	.
10AUG91:03:45	EGL	25.64	0.00	2.12	250.60	91.70	24.12	24.51	24.54	24.21	.
10AUG91:04:00	EGL	25.49	0.00	1.70	264.60	92.00	24.05	24.42	24.44	24.17	.
10AUG91:04:15	EGL	25.54	0.00	1.72	257.10	92.00	24.05	24.39	24.48	24.16	.
10AUG91:04:30	EGL	25.46	0.00	1.61	236.40	92.20	23.87	24.14	24.25	23.98	.
10AUG91:04:45	EGL	25.14	0.00	1.52	213.50	92.70	23.63	23.76	23.84	23.80	.
10AUG91:05:00	EGL	25.01	0.00	1.38	265.20	93.30	23.73	23.91	23.96	23.97	.
10AUG91:05:15	EGL	25.20	0.00	1.21	279.40	93.20	24.03	24.21	24.26	24.24	.
10AUG91:05:30	EGL	25.32	0.00	0.72	315.60	93.00	24.00	24.13	24.19	24.30	.
10AUG91:05:45	EGL	25.23	0.00	0.91	287.40	93.00	23.45	23.79	23.86	23.86	.
10AUG91:06:00	EGL	24.98	0.19	1.05	263.50	93.10	23.33	23.64	23.73	23.78	.
10AUG91:06:15	EGL	24.94	6.38	0.75	277.00	93.40	23.48	23.75	23.91	23.84	.
10AUG91:06:30	EGL	25.02	20.28	0.72	333.30	93.40	23.73	23.82	23.94	24.06	.
10AUG91:06:45	EGL	25.32	41.12	0.83	310.40	93.20	24.36	24.35	24.52	24.45	.
10AUG91:07:00	EGL	25.77	58.88	1.17	325.20	92.40	25.00	25.05	25.18	24.76	.
10AUG91:07:15	EGL	26.14	117.10	1.78	333.30	91.70	25.56	25.78	25.94	25.19	.
10AUG91:07:30	EGL	26.80	237.00	1.84	332.50	90.80	26.87	27.22	27.52	26.56	.
10AUG91:07:45	EGL	27.70	293.10	1.25	286.80	89.50	27.87	28.15	28.43	27.64	.
10AUG91:08:00	EGL	28.27	364.70	1.80	311.10	88.40	28.41	28.49	28.66	27.89	.
10AUG91:08:15	EGL	28.74	390.30	1.93	281.50	87.50	29.03	28.89	29.06	29.08	.
10AUG91:08:30	EGL	29.15	451.00	2.01	294.00	86.40	29.87	29.28	29.32	29.61	.
10AUG91:08:45	EGL	29.48	424.50	1.63	273.80	85.20	30.47	29.37	29.58	30.10	.
10AUG91:09:00	EGL	29.51	422.30	2.34	271.00	84.80	30.62	29.16	29.14	30.10	.
10AUG91:09:15	EGL	29.67	432.90	1.79	294.80	84.70	31.54	29.51	29.60	30.72	.
10AUG91:09:30	EGL	29.71	356.20	1.92	300.30	84.70	30.57	28.90	28.87	30.07	.
10AUG91:09:45	EGL	29.71	426.10	1.89	318.30	84.60	32.04	29.4	29.70	31.63	.
10AUG91:10:00	EGL	30.19	612.10	1.85	294.50	83.40	33.87	30.64	30.8	33.58	.
10AUG91:10:15	EGL	30.44	526.10	2.14	324.40	82.40	34.24	30.60	31.15	33.58	.
10AUG91:10:30	EGL	30.57	552.30	2.51	309.40	81.30	35.23	31.15	31.47	34.46	.
10AUG91:10:45	EGL	31.04	745.00	1.85	285.90	78.70	35.87	31.79	32.16	36.14	.
10AUG91:11:00	EGL	30.99	441.60	3.44	336.30	77.20	32.81	30.03	2 94	32.55	.
10AUG91:11:15	EGL	31.63	843.00	2.73	323.10	74.30	38.13	32.88	33.41	38.51	.
10AUG91:11:30	EGL	32.09	748.00	2.29	266.40	70.70	37.28	32.07	32.63	36.39	.
10AUG91:11:45	EGL	32.06	535.50	1.90	312.10	68.48	34.85	31.21	31.60	35.40	.
10AUG91:12:00	EGL	31.91	632.20	3.66	332.70	68.42	34.67	31.20	31.12	35.01	.
10AUG91:12:15	EGL	32.38	689.20	2.49	333.10	67.03	36.91	32.20	32.50	37.31	.
10AUG91:12:30	EGL	32.38	584.10	2.71	266.70	64.43	35.93	31.43	31.80	35.22	.
10AUG91:12:45	EGL	32.34	573.10	2.04	289.70	63.97	35.89	31.52	31.91	35.94	.
10AUG91:13:00	EGL	32.76	709.00	2.08	277.80	63.63	38.31	32.81	33.50	38.11	.
10AUG91:13:15	EGL	33.12	696.10	2.50	256.60	61.81	37.61	32.48	33.06	37.73	.

(Continued)

Table D3 (Continued)

DAY AND TIME OF COLLECTION	VISITED SITE	AIR TEMP. (C)	SOLAR RADIATION (W/M**2)	WIND MAGNITUD (M/S)	WIND DIRECTION (DEGREES)	RELATIVE HUMIDITY (PERCENT)	BCKGND GRASS (C)	BCKGND BUSH (C)	BCKGND TREE (C)	BCKGND SOIL (C)	BCKGND ROAD (C)
10AUG91:13:30	EGL	33.16	644.80	2.08	285.10	60.42	37.11	32.30	32.97	37.36	.
10AUG91:13:45	EGL	33.36	794.00	3.18	253.10	61.46	38.42	32.78	33.35	38.21	.
10AUG91:14:00	EGL	33.53	845.00	3.52	251.30	60.28	39.34	33.30	33.95	38.79	.
10AUG91:14:15	EGL	33.72	863.00	3.53	254.10	59.49	39.43	33.05	33.91	39.49	.
10AUG91:14:30	EGL	33.68	783.00	3.44	236.00	60.48	39.02	33.41	33.97	39.16	.
10AUG91:14:45	EGL	33.53	607.40	3.37	219.10	62.77	38.[illegible]	32.59	32.82	37.98	.
10AUG91:15:00	EGL	33.02	509.60	3.76	227.80	66.08	[illegible]7	31.44	31.65	35.89	.
10AUG91:15:15	EGL	32.57	488.70	3.26	227.90	67.53	35.[illegible]9	31.30	31.65	36.41	.
10AUG91:15:30	EGL	32.25	482.10	4.22	212.70	69.26	34.89	30.91	31.13	35.21	.
10AUG91:15:45	EGL	32.10	512.40	4.09	230.30	70.00	35.99	31.41	31.68	35.29	.
10AUG91:16:00	EGL	32.29	583.40	4.16	225.60	69.71	36.57	31.92	32.71	36.90	.
10AUG91:16:15	EGL	32.25	440.50	4.22	234.50	69.43	35.79	31.56	32.16	36.06	.
10AUG91:16:30	EGL	30.10	75.00	2.66	267.20	65.07	28.38	26.96	26.61	29.06	.
10AUG91:16:45	EGL	28.58	162.50	1.15	310.50	64.76	29.59	27.07	27.22	30.73	.
10AUG91:17:00	EGL	28.65	166.70	0.92	231.10	67.10	29.96	27.02	27.55	30.96	.
10AUG91:17:15	EGL	28.83	166.10	0.89	207.00	70.50	29.76	27.09	27.59	30.64	.
10AUG91:17:30	EGL	28.87	144.00	1.72	200.00	72.20	29.69	27.54	27.98	30.56	.
10AUG91:17:45	EGL	29.14	124.40	2.36	227.00	76.40	29.84	28.13	28.48	30.41	.
10AUG91:18:00	EGL	29.39	108.20	3.10	223.20	81.00	29.77	28.48	28.75	30.09	.
10AUG91:18:15	EGL	29.33	88.40	2.89	230.20	81.90	29.26	28.30	28.51	29.61	.
10AUG91:18:30	EGL	29.17	67.92	2.93	231.80	82.70	28.94	28.12	28.30	29.33	.
10AUG91:18:45	EGL	28.95	45.81	3.28	239.40	83.50	28.40	27.90	28.01	28.75	.
10AUG91:19:00	EGL	28.75	26.46	2.86	241.90	85.10	28.04	27.73	27.82	28.55	.
10AUG91:19:15	EGL	28.48	16.04	3.06	226.00	87.00	27.50	27.46	27.53	28.02	.
10AUG91:19:30	EGL	28.26	4.42	3.21	246.90	88.00	27.23	27.26	27.28	27.64	.
10AUG91:19:45	EGL	28.06	0.19	2.60	235.30	88.90	26.96	27.00	27.04	27.54	.
10AUG91:20:00	EGL	27.88	0.00	2.26	234.90	89.70	26.78	26.80	26.84	27.33	.
10AUG91:20:15	EGL	27.83	0.00	2.47	261.30	90.00	26.77	26.93	26.96	27.32	.
10AUG91:20:30	EGL	27.84	0.00	2.04	267.10	90.10	26.67	26.87	26.84	27.22	.
10AUG91:20:45	EGL	27.76	0.00	1.97	267.50	90.10	26.60	26.78	26.74	27.12	.
10AUG91:21:00	EGL	27.77	0.00	2.43	266.60	89.90	26.48	26.79	26.73	27.04	.
10AUG91:21:15	EGL	27.73	0.00	2.05	273.80	89.70	26.25	26.60	26.55	26.83	.
10AUG91:21:30	EGL	27.64	0.00	1.47	269.60	89.60	26.01	26.31	26.23	26.57	.
10AUG91:21:45	EGL	27.50	0.00	1.37	277.90	89.80	25.57	25.97	25.86	26.28	.
10AUG91:22:00	EGL	27.33	0.00	1.35	273.80	89.90	25.23	25.81	25.68	26.02	.
10AUG91:22:15	EGL	26.99	0.00	1.29	265.10	90.40	25.16	25.42	25.49	25.78	.
10AUG91:22:30	EGL	26.57	0.00	1.12	263.10	91.20	24.79	24.93	25.01	25.53	.
10AUG91:22:45	EGL	26.31	0.00	1.08	256.90	91.80	24.51	24.73	24.80	25.36	.
10AUG91:23:00	EGL	26.05	0.00	1.20	242.00	92.20	24.36	24.44	24.52	25.19	.
10AUG91:23:15	EGL	25.85	0.00	1.41	244.60	92.70	24.36	24.50	24.56	25.13	.
10AUG91:23:30	EGL	25.80	0.00	1.54	244.40	93.00	24.51	24.60	24.73	25.16	.
10AUG91:23:45	EGL	25.73	0.00	1.20	247.30	93.00	24.25	24.42	24.51	24.99	.
11AUG91:00:00	EGL	25.58	0.00	1.26	250.70	93.10	24.08	24.26	24.37	24.86	.
11AUG91:00:15	EGL	25.54	0.00	1.01	288.10	93.30	24.14	24.30	24.38	24.89	.
11AUG91:00:30	EGL	25.51	0.00	1.05	262.30	93.30	24.05	24.27	24.40	24.92	.
11AUG91:00:45	EGL	25.51	0.00	0.76	271.10	93.30	24.42	24.37	24.55	25.12	.
11AUG91:01:00	EGL	25.32	0.00	0.42	346.20	93.40	23.53	23.84	23.96	24.48	.
11AUG91:01:15	EGL	25.03	0.00	0.55	157.60	93.50	23.27	23.75	23.91	24.28	.
11AUG91:01:30	EGL	24.80	0.00	0.50	60.60	93.70	23.51	23.56	23.74	24.41	.
11AUG91:01:45	EGL	24.98	0.00	0.78	273.00	93.90	23.79	23.92	24.08	24.69	.
11AUG91:02:00	EGL	25.24	0.00	0.51	316.70	93.90	23.78	24.03	24.10	24.51	.

(Continued)

Table 03 (Continued)

DAY AND TIME OF COLLECTION	VISITED SITE	AIR TEMP. (C)	SOLAR RADIATION (W/M**2)	WIND MAGNITUD (M/S)	WIND DIRECTION (DEGREES)	RELATIVE HUMIDITY (PERCENT)	BCKGND GRASS (C)	BCKGND BUSH (C)	BCKGND TREE (C)	BCKGND SOIL (C)	BCKGND ROAD (C)
11AUG91:02:15	EGL	25.30	0.00	1.55	263.90	93.70	23.94	24.19	24.27	24.54	.
11AUG91:02:30	EGL	25.28	0.00	1.56	266.40	93.50	24.14	24.23	24.32	24.53	.
11AUG91:02:45	EGL	25.35	0.00	1.48	253.60	93.30	24.84	24.49	24.62	25.20	.
11AUG91:03:00	EGL	25.41	0.00	1.79	263.20	93.10	24.52	24.37	24.48	24.81	.
11AUG91:03:15	EGL	25.35	0.00	2.66	252.50	93.00	24.66	24.41	24.53	24.85	.
11AUG91:03:30	EGL	25.36	0.00	1.90	270.40	92.20	24.01	24.10	24.10	24.29	.
11AUG91:03:45	EGL	25.20	0.00	0.98	242.20	91.80	23.95	23.85	23.91	24.38	.
11AUG91:04:00	EGL	24.86	0.00	1.05	211.20	92.00	23.71	23.44	23.56	24.20	.
11AUG91:04:15	EGL	24.42	0.00	1.97	219.40	92.30	23.48	23.37	23.44	23.83	.
11AUG91:04:30	EGL	24.27	0.00	2.22	202.90	92.40	23.38	23.26	23.37	23.80	.
11AUG91:04:45	EGL	24.20	0.00	2.26	216.60	91.80	23.25	23.17	23.24	23.68	.
11AUG91:05:00	EGL	24.11	0.00	1.84	214.70	90.80	22.90	22.96	23.03	23.45	.
11AUG91:05:15	EGL	23.91	0.00	1.77	197.80	91.00	22.70	22.80	22.83	23.42	.
11AUG91:05:30	EGL	23.75	0.00	1.20	207.10	91.30	22.70	22.56	22.67	23.44	.
11AUG91:05:45	EGL	23.74	0.00	0.77	287.70	91.50	22.78	22.63	22.70	23.51	.
11AUG91:06:00	EGL	23.93	0.00	0.80	307.70	91.40	22.83	22.74	22.76	23.59	.
11AUG91:06:15	EGL	23.89	0.71	0.53	26.10	91.70	22.91	22.50	22.63	23.60	.
11AUG91:06:30	EGL	23.59	5.48	0.97	19.76	92.60	23.08	22.48	22.62	23.70	.
11AUG91:06:45	EGL	23.53	14.27	0.67	355.80	93.00	23.32	22.71	22.87	23.89	.
11AUG91:07:00	EGL	23.76	24.76	0.66	308.80	92.90	23.70	23.12	23.31	24.21	.
11AUG91:07:15	EGL	24.11	39.46	0.76	303.40	92.30	24.04	23.57	23.76	24.50	.
11AUG91:07:30	EGL	24.34	60.11	1.03	356.10	92.00	24.51	23.95	24.19	24.87	.
11AUG91:07:45	EGL	24.59	67.73	1.39	345.80	91.70	24.86	24.23	24.53	25.14	.
11AUG91:08:00	EGL	24.86	89.60	1.21	347.10	91.30	25.31	24.69	25.01	25.66	.
11AUG91:08:15	EGL	25.19	106.20	0.98	325.50	91.10	25.87	25.07	25.41	26.08	.
11AUG91:08:30	EGL	25.50	133.60	1.11	324.40	90.90	25.94	25.30	25.63	26.04	.
11AUG91:08:45	EGL	25.76	178.60	2.20	332.20	90.60	26.65	25.72	26.09	26.87	.
11AUG91:09:00	EGL	26.06	244.80	1.86	341.10	90.20	28.06	26.64	27.10	28.23	.
11AUG91:09:15	EGL	26.97	506.20	1.71	328.30	89.20	31.38	28.61	29.46	31.71	.
11AUG91:09:30	EGL	28.29	584.40	0.26	291.60	86.60	33.48	29.85	30.89	33.44	.
11AUG91:09:45	EGL	29.64	708.00	1.37	249.70	81.50	35.72	31.16	31.80	35.14	.
11AUG91:10:00	EGL	30.17	699.30	1.35	262.90	80.00	35.81	30.82	31.60	34.77	.
11AUG91:10:15	EGL	31.15	833.00	2.05	215.90	75.30	37.20	31.38	31.64	36.38	.
11AUG91:10:30	EGL	31.42	951.00	2.73	252.30	72.10	38.14	31.97	32.17	36.83	.
11AUG91:10:45	EGL	31.83	795.00	1.92	263.00	69.33	37.08	31.58	31.87	37.36	.
11AUG91:11:00	EGL	30.99	721.00	2.62	259.00	70.60	35.59	30.42	30.91	34.98	.
11AUG91:11:15	EGL	31.66	902.00	1.92	260.20	67.7:	38.62	32.16	32.49	38.74	.
11AUG91:11:30	EGL	31.86	702.00	1.26	329.40	65.31	36.40	31.40	31.70	37.31	.
11AUG91:11:45	EGL	32.38	1111.00	1.28	293.70	63.87	40.45	33.33	34.01	41.73	.
11AUG91:12:00	EGL	32.07	733.00	2.56	292.30	63.52	36.85	31.70	32.03	38.11	.
11AUG91:12:15	EGL	32.06	1014.00	1.36	343.90	64.81	41.14	33.60	34.30	41.96	.
11AUG91:12:30	EGL	32.28	490.50	1.85	4.12	64.22	36.53	31.88	31.53	38.21	.
11AUG91:12:45	EGL	31.49	308.50	1.86	341.70	65.48	32.89	29.93	29.80	34.42	.
11AUG91:13:00	EGL	31.89	663.80	1.63	293.20	63.93	37.80	32.25	32.95	38.35	.
11AUG91:13:15	EGL	32.53	655.90	1.97	323.30	61.86	38.08	32.57	33.31	39.38	.
11AUG91:13:30	EGL	32.71	708.00	2.03	265.30	61.07	37.38	32.16	32.79	38.25	.
11AUG91:13:45	EGL	32.49	648.50	1.76	284.60	60.87	37.59	32.20	32.74	38.20	.
11AUG91:14:00	EGL	32.92	669.00	2.08	254.10	60.49	39.06	33.21	33.69	40.34	.
11AUG91:14:15	EGL	32.86	594.90	3.02	248.00	60.54	34.92	31.03	30.91	36.01	.
11AUG91:14:30	EGL	32.81	619.80	2.22	268.50	60.50	36.88	31.75	32.35	38.07	.
11AUG91:14:45	EGL	33.39	566.40	1.16	276.60	59.23	37.64	32.42	33.07	39.10	.

(Continued)

Table D3 (Concluded)

DAY AND TIME OF COLLECTION	VISITED SITE	AIR TEMP. (C)	SOLAR RADIATION (W/M**2)	WIND MAGNITUD (M/S)	WIND DIRECTION (DEGREES)	RELATIVE HUMIDITY (PERCENT)	BCKGND GRASS (C)	BCKGND BUSH (C)	BCKGND TREE (C)	BCKGND SOIL (C)	BCKGND ROAD (C)
11AUG91:15:00	EGL	32.65	295.90	1.32	297.00	60.05	33.99	30.49	30.58	34.70	.
11AUG91:15:15	EGL	31.66	291.80	1.07	113.90	62.01	33.71	29.45	29.49	34.04	.
11AUG91:15:30	EGL	29.58	201.90	2.10	111.50	69.40	30.90	27.49	27.20	31.91	.
11AUG91:15:45	EGL	29.82	373.60	2.54	136.30	73.50	34.26	29.69	29.87	34.93	.
11AUG91:16:00	EGL	29.68	129.40	3.10	181.90	75.20	30.88	28.14	28.23	31.97	.
11AUG91:16:15	EGL	27.00	66.26	4.90	182.90	77.40	25.87	24.35	24.09	26.82	.
11AUG91:16:30	EGL	24.89	66.30	5.11	174.70	88.20	23.86	22.51	22.25	24.86	.
11AUG91:16:45	EGL	24.07	24.56	4.44	195.10	93.10	23.66	22.44	22.30	24.99	.
11AUG91:17:00	EGL	24.09	10.66	3.72	254.70	93.10	23.73	22.60	22.57	25.15	.
11AUG91:17:15	EGL	23.60	5.38	2.91	262.20	93.20	22.98	22.27	22.32	24.52	.
11AUG91:17:30	EGL	23.30	7.91	0.95	2.63	93.80	23.37	22.43	22.56	25.14	.
11AUG91:17:45	EGL	23.34	10.24	1.53	3.63	94.40	23.82	22.72	22.85	25.40	.
11AUG91:18:00	EGL	23.47	10.33	0.83	8.97	94.50	24.03	22.84	22.96	25.60	.
11AUG91:18:15	EGL	23.66	7.21	0.11	187.70	94.50	24.39	23.09	23.24	25.72	.
11AUG91:18:30	EGL	23.80	4.26	0.69	28.44	94.40	24.42	23.20	23.35	25.60	.
11AUG91:18:45	EGL	23.74	1.39	1.56	21.67	94.40	24.32	23.06	23.20	25.38	.
11AUG91:19:00	EGL	23.87	0.43	1.08	353.70	94.30	24.48	23.27	23.44	25.51	.
11AUG91:19:15	EGL	23.94	0.00	2.27	349.20	94.30	24.39	23.25	23.37	25.18	.
11AUG91:19:30	EGL	23.82	0.00	2.74	349.00	93.90	23.89	22.87	22.93	24.78	.
11AUG91:19:45	EGL	23.46	0.00	4.38	337.60	93.50	23.25	22.23	22.27	23.84	.
11AUG91:20:00	EGL	22.91	0.00	4.46	335.00	93.50	22.76	21.80	21.86	23.50	.
11AUG91:20:15	EGL	22.67	0.00	4.35	345.80	93.90	22.83	21.80	21.89	23.54	.
11AUG91:20:30	EGL	22.67	0.00	3.15	348.20	94.10	22.84	21.93	22.05	23.58	.
11AUG91:20:45	EGL	22.70	0.00	2.61	340.70	94.30	22.94	22.01	22.12	23.58	.
11AUG91:21:00	EGL	22.65	0.00	1.89	349.30	94.30	22.88	21.94	22.03	23.64	.
11AUG91:21:15	EGL	22.59	0.00	1.50	355.80	94.30	22.85	21.82	21.88	23.57	.
11AUG91:21:30	EGL	22.55	0.00	0.69	1.84	94.40	22.88	21.79	21.90	23.70	.
11AUG91:21:45	EGL	22.64	0.00	0.39	356.10	94.40	23.08	21.96	22.10	23.87	.
11AUG91:22:00	EGL	22.73	0.00	0.41	342.20	94.50	23.06	21.96	22.10	23.83	.
11AUG91:22:15	EGL	22.74	0.00	0.40	357.70	94.50	23.18	21.98	22.14	23.79	.
11AUG91:22:30	EGL	22.79	0.00	0.75	3.48	94.50	23.28	22.06	22.21	23.75	.
11AUG91:22:45	EGL	22.75	0.00	1.71	353.70	94.50	23.20	22.03	22.16	23.61	.
11AUG91:23:00	EGL	22.81	0.00	0.68	341.20	94.50	23.23	22.01	22.12	23.64	.
11AUG91:23:15	EGL	22.87	0.00	0.37	0.62	94.40	23.36	22.12	22.24	23.80	.
11AUG91:23:30	EGL	22.90	0.00	0.41	35.68	94.30	23.37	22.14	22.30	23.82	.
11AUG91:23:45	EGL	22.93	0.00	0.83	200.70	94.40	23.41	22.23	22.36	23.71	.

Table D4
Scene Content Reports for Eglin AFB; Angular Scale of Photos Interpreted Equals 0.82 deg/in.

Scene #1 TOTAL AREA: 9.5522 SQ IN.

RECORD NUMBER	AREA OR OBJECT	CHARACTERISTIC	COLOR	POLYGON AREA (SQ IN.)	PERCENTAGE OF AREA	POLYGON PERIMETER (INCHES)
2	Trees	Leaves On	Green	5.8791	61.55	12.5497
3	Man-Made	Telephone Pole	White	0.0819	0.86	2.4948
4	Grass	Bushy Area	Green	3.5911	37.59	8.5513

NUMBER OF POLYGONS: 3

DIFFERENT TYPES OF OBJECTS: 3

PERCENTAGE OF AREA FOR TYPE Man-Made IS 0.86%
PERCENTAGE OF AREA FOR TYPE Grass IS 37.59%
PERCENTAGE OF AREA FOR TYPE Trees IS 61.55%
PERCENTAGE OF AREA FOR TYPE Road IS 0.00%
PERCENTAGE OF AREA FOR TYPE Water IS 0.00%
PERCENTAGE OF AREA FOR TYPE Sky IS 0.00%
PERCENTAGE OF AREA FOR TYPE Soil IS 0.00%
PERCENTAGE OF AREA FOR TYPE Mountain IS 0.00%

TOTAL EDGE LENGTH: 5.6161 IN.

LINEAR EDGES BETWEEN TYPES (INCHES)

	Man-Made	Grass	Trees	Road	Water	Sky	Soil	Mountain
Man-Made	0.0000	0.0000	2.4948	0.0000	0.0000	0.0000	0.0000	0.0000
Grass	0.0000	0.0000	3.1213	0.0000	0.0000	0.0000	0.0000	0.0000
Trees	2.4948	3.1213	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Sky	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Soil	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mountain	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

NUMBER OF VEHICLES: 0

GREEN VEGETATION PRESENT: YES

(Continued)

Table D4 (Continued)

Scene #2 TOTAL AREA: 9.5357 SQ IN.

RECORD NUMBER	AREA OR OBJECT	CHARACTERISTIC	COLOR	POLYGON AREA (SQ IN.)	PERCENTAGE OF AREA	POLYGON PERIMETER (INCHES)
2	Trees	Leaves On	Green	5.4027	56.66	15.1224
3	Man-Made	Building	White	0.0212	0.22	0.6221
4	Grass	Bushy Area	Green	0.1504	1.58	3.3074
5	Man-Made	Telephone Pole	Brown	0.0643	0.67	2.1729
6	Grass	Bushy Area	Green	3.8971	40.87	8.7707

NUMBER OF POLYGONS: 5

DIFFERENT TYPES OF OBJECTS: 3

PERCENTAGE OF AREA FOR TYPE Man-Made IS 0.90%
PERCENTAGE OF AREA FOR TYPE Grass IS 42.45%
PERCENTAGE OF AREA FOR TYPE Trees IS 56.66%
PERCENTAGE OF AREA FOR TYPE Road IS 0.00%
PERCENTAGE OF AREA FOR TYPE Water IS 0.00%
PERCENTAGE OF AREA FOR TYPE Sky IS 0.00%
PERCENTAGE OF AREA FOR TYPE Soil IS 0.00%
PERCENTAGE OF AREA FOR TYPE Mountain IS 0.00%

TOTAL EDGE LENGTH: 8.8218 IN.

LINEAR EDGES BETWEEN TYPES (INCHES)

	Man-Made	Grass	Trees	Road	Water	Sky	Soil	Mountain
Man-Made	0.0000	0.0000	2.6092	0.0000	0.0000	0.0000	0.0000	0.0000
Grass	0.0000	0.0000	6.2126	0.0000	0.0000	0.0000	0.0000	0.0000
Trees	2.6092	6.2126	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Sky	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Soil	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mountain	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

NUMBER OF VEHICLES: 0

GREEN VEGETATION PRESENT: YES

(Continued)

Table D4 (Continued)

Scene #3 TOTAL AREA: 9.5209 SQ IN.

RECORD NUMBER	AREA OR OBJECT	CHARACTERISTIC	COLOR	POLYGON AREA (SQ IN.)	PERCENTAGE OF AREA	POLYGON PERIMETER (INCHES)
2	Trees	Leaves On	Green	0.6618	6.95	6.5770
3	Grass	Bushy Area	Green	1.5871	16.67	11.0127
4	Trees	Leaves On	Green	3.3867	35.57	14.2157
5	Man-Made	Telephone Pole	Brown	0.0373	0.39	1.8451
6	Man-Made	Telephone Pole	Tan	0.0383	0.40	1.4868
7	Grass	Bushy Area	Green	3.8098	40.02	8.6575

NUMBER OF POLYGONS: 6

DIFFERENT TYPES OF OBJECTS: 3

PERCENTAGE OF AREA FOR TYPE Man-Made IS 0.79%
PERCENTAGE OF AREA FOR TYPE Grass IS 56.68%
PERCENTAGE OF AREA FOR TYPE Trees IS 42.52%
PERCENTAGE OF AREA FOR TYPE Road IS 0.00%
PERCENTAGE OF AREA FOR TYPE Water IS 0.00%
PERCENTAGE OF AREA FOR TYPE Sky IS 0.00%
PERCENTAGE OF AREA FOR TYPE Soil IS 0.00%
PERCENTAGE OF AREA FOR TYPE Mountain IS 0.00%

TOTAL EDGE LENGTH: 15.7258 IN.

LINEAR EDGES BETWEEN TYPES (INCHES)

	Man-Made	Grass	Trees	Road	Water	Sky	Soil	Mountain
Man-Made	0.0000	0.4350	2.8969	0.0000	0.0000	0.0000	0.0000	0.0000
Grass	0.4350	0.0000	12.3939	0.0000	0.0000	0.0000	0.0000	0.0000
Trees	2.8969	12.3939	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Sky	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Soil	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mountain	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

NUMBER OF VEHICLES: 0

GREEN VEGETATION PRESENT: YES

(Continued)

Table D4 (Continued)

Scene #4 TOTAL AREA: 9.5771 SQ IN.

RECORD NUMBER	AREA OR OBJECT	CHARACTERISTIC	COLOR	POLYGON AREA (SQ IN.)	PERCENTAGE OF AREA	POLYGON PERIMETER (INCHES)
2	Trees	Leaves On	Green	0.3554	3.71	4.3021
3	Man-Made	Telephone Pole	Tan	0.0075	0.08	0.5419
4	Trees	Leaves On	Green	0.1905	1.99	2.5976
5	Man-Made	Telephone Pole	Tan	0.0036	0.09	0.5183
6	Grass	Bushy Area	Green	2.5360	26.48	9.6466
7	Trees	Leaves On	Green	2.4229	25.30	10.3156
8	Man-Made	Telephone Pole	Tan	0.0362	0.38	1.6685
9	Grass	Bushy Area	Green	3.9703	41.46	11.8204
10	Grass	Short Field	Green	0.0497	0.52	3.1187

NUMBER OF POLYGONS: 9

DIFFERENT TYPES OF OBJECTS: 3

PERCENTAGE OF AREA FOR TYPE Man-Made IS 0.55%
PERCENTAGE OF AREA FOR TYPE Grass IS 68.46%
PERCENTAGE OF AREA FOR TYPE Trees IS 31.00%
PERCENTAGE OF AREA FOR TYPE Road IS 0.00%
PERCENTAGE OF AREA FOR TYPE Water IS 0.00%
PERCENTAGE OF AREA FOR TYPE Sky IS 0.00%
PERCENTAGE OF AREA FOR TYPE Soil IS 0.00%
PERCENTAGE OF AREA FOR TYPE Mountain IS 0.00%

TOTAL EDGE LENGTH: 16.0752 IN.

LINEAR EDGES BETWEEN TYPES (INCHES)

	Man-Made	Grass	Trees	Road	Water	Sky	Soil	Mountain
Man-Made	0.0000	0.5009	2.1981	0.0000	0.0000	0.0000	0.0000	0.0000
Grass	0.5009	3.0865	10.2897	0.0000	0.0000	0.0000	0.0000	0.0000
Trees	2.1981	10.2897	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Sky	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Soil	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mountain	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

NUMBER OF VEHICLES: 0

GREEN VEGETATION PRESENT: YES

(Continued)

Table D4 (Continued)

Scene #5 TOTAL AREA: 9.5605 SQ IN.

RECORD NUMBER	AREA OR OBJECT	CHARACTERISTIC	COLOR	POLYGON AREA (SQ IN.)	PERCENTAGE OF AREA	POLYGON PERIMETER (INCHES)
2	Trees	Leaves On	Green	0.6028	6.30	6.5140
3	Grass	Bushy Area	Green	2.2930	23.98	11.2748
4	Man-Made	Telephone Pole	Brown	0.0199	0.21	1.2181
5	Man-Made	Telephone Pole	Brown	0.0174	0.18	0.9415
6	Trees	Leaves On	Green	2.4304	25.42	12.8789
7	Road	Dirt	Sandy	0.0089	0.09	0.6410
8	Road	Dirt	Sandy	0.0243	0.25	0.7157
9	Road	Dirt	Sandy	0.0471	0.49	0.9107
10	Man-Made	Telephone Pole	Brown	0.0364	0.38	1.5645
11	Man-Made	Telephone Pole	Brown	0.0280	0.29	1.1305
12	Grass	Bushy Area	Green	0.0414	0.43	1.0781
13	Grass	Bushy Area	Green	0.0173	0.18	0.5827
14	Grass	Bushy Area	Green	0.4265	4.46	6.5485
15	Grass	Short Field	Green	0.1430	1.50	6.3863
16	Grass	Bushy Area	Green	3.4242	35.82	8.4662

NUMBER OF POLYGONS: 15

DIFFERENT TYPES OF OBJECTS: 4

PERCENTAGE OF AREA FOR TYPE Man-Made IS 1.06%
PERCENTAGE OF AREA FOR TYPE Grass IS 66.37%
PERCENTAGE OF AREA FOR TYPE Trees IS 31.73%
PERCENTAGE OF AREA FOR TYPE Road IS 0.84%
PERCENTAGE OF AREA FOR TYPE Water IS 0.00%
PERCENTAGE OF AREA FOR TYPE Sky IS 0.00%
PERCENTAGE OF AREA FOR TYPE Soil IS 0.00%
PERCENTAGE OF AREA FOR TYPE Mountain IS 0.00%

TOTAL EDGE LENGTH: 24.2416 IN.

LINEAR EDGES BETWEEN TYPES (INCHES)

	Man-Made	Grass	Trees	Road	Water	Sky	Soil	Mountain
Man-Made	0.0000	2.6162	2.2384	0.0000	0.0000	0.0000	0.0000	0.0000
Grass	2.6162	6.2846	10.8680	0.8883	0.0000	0.0000	0.0000	0.0000
Trees	2.2384	10.8680	0.0000	1.3460	0.0000	0.0000	0.0000	0.0000
Road	0.0000	0.8883	1.3460	0.0000	0.0000	0.0000	0.0000	0.0000
Water	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Sky	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Soil	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mountain	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

NUMBER OF VEHICLES: 0

GREEN VEGETATION PRESENT: YES

(Continued)

Table D4 (Continued)

Scene #6 TOTAL AREA: 9.4998 SQ IN.

RECORD NUMBER	AREA OR OBJECT	CHARACTERISTIC	COLOR	POLYGON AREA (SQ IN.)	PERCENTAGE OF AREA	POLYGON PERIMETER (INCHES)
2	Trees	Leaves On	Green	0.6753	7.11	6.5357
3	Grass	Bushy Area	Green	1.8090	19.04	9.6818
4	Man-Made	Telephone Pole	Brown	0.0097	0.10	0.7095
5	Man-Made	Telephone Pole	Brown	0.0133	0.14	0.9126
6	Man-Made	Telephone Pole	Brown	0.0083	0.09	0.6063
7	Road	Dirt	Sandy	0.0560	0.59	2.2497
8	Grass	Bushy Area	Green	0.1258	1.32	2.0471
9	Trees	Leaves On	Green	1.7424	18.34	8.6236
10	Road	Dirt	Sandy	0.0082	0.09	0.6272
11	Man-Made	Telephone Pole	Brown	0.0177	0.19	0.9902
12	Grass	Bushy Area	Green	1.4357	15.11	8.8537
13	Grass	Bushy Area	Green	0.0135	0.14	0.6296
14	Trees	Leaves On	Green	0.0271	0.29	0.7848
15	Grass	Short Field	Green	0.2012	2.12	6.3674
16	Grass	Bushy Area	Green	3.3564	35.33	8.2941

NUMBER OF POLYGONS: 15

DIFFERENT TYPES OF OBJECTS: 4

PERCENTAGE OF AREA FOR TYPE Man-Made IS 0.52%
PERCENTAGE OF AREA FOR TYPE Grass IS 73.07%
PERCENTAGE OF AREA FOR TYPE Trees IS 25.74%
PERCENTAGE OF AREA FOR TYPE Road IS 0.68%
PERCENTAGE OF AREA FOR TYPE Water IS 0.00%
PERCENTAGE OF AREA FOR TYPE Sky IS 0.00%
PERCENTAGE OF AREA FOR TYPE Soil IS 0.00%
PERCENTAGE OF AREA FOR TYPE Mountain IS 0.00%

TOTAL EDGE LENGTH: 22.7916 IN.

LINEAR EDGES BETWEEN TYPES (INCHES)

	Man-Made	Grass	Trees	Road	Water	Sky	Soil	Mountain
Man-Made	0.0000	2.9107	0.3078	0.0000	0.0000	0.0000	0.0000	0.0000
Grass	2.9107	6.1929	10.6380	2.2664	0.0000	0.0000	0.0000	0.0000
Trees	0.3078	10.6380	0.0000	0.4757	0.0000	0.0000	0.0000	0.0000
Road	0.0000	2.2664	0.4757	0.0000	0.0000	0.0000	0.0000	0.0000
Water	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Sky	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Soil	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mountain	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

NUMBER OF VEHICLES: 0

GREEN VEGETATION PRESENT: YES

(Continued)

Table D4 (Continued)

Scene #7 TOTAL AREA: 9.4820 SQ IN.

RECORD NUMBER	AREA OR OBJECT	CHARACTERISTIC	COLOR	POLYGON AREA (SQ IN.)	PERCENTAGE OF AREA	POLYGON PERIMETER (INCHES)
2	Trees	Leaves On	Green	0.7188	7.58	6.7727
3	Man-Made	Telephone Pole	Brown	0.0107	0.11	0.5849
4	Man-Made	Telephone Pole	Brown	0.0115	0.12	0.5833
5	Grass	Bushy Area	Green	2.2883	24.13	14.4790
6	Man-Made	Telephone Pole	Brown	0.0100	0.11	0.6756
7	Man-Made	Telephone Pole	Brown	0.0114	0.12	0.7825
8	Man-Made	Telephone Pole	Brown	0.0097	0.10	0.5803
9	Road	Dirt	Sandy	0.0244	0.26	1.7442
10	Soil	Sandy Area	Sandy	0.0873	0.92	1.4552
11	Road	Dirt	Sandy	0.0290	0.31	1.2064
12	Trees	Leaves On	Green	1.2053	12.71	6.9970
13	Grass	Bushy Area	Green	1.6280	17.17	7.2243
14	Grass	Short Field	Green	0.2109	2.22	6.5148
15	Grass	Bushy Area	Green	3.2367	34.14	8.3834

NUMBER OF POLYGONS: 14

DIFFERENT TYPES OF OBJECTS: 5

PERCENTAGE OF AREA FOR TYPE Man-Made IS 0.56%
PERCENTAGE OF AREA FOR TYPE Grass IS 77.66%
PERCENTAGE OF AREA FOR TYPE Trees IS 20.29%
PERCENTAGE OF AREA FOR TYPE Road IS 0.56%
PERCENTAGE OF AREA FOR TYPE Water IS 0.00%
PERCENTAGE OF AREA FOR TYPE Sky IS 0.00%
PERCENTAGE OF AREA FOR TYPE Soil IS 0.92%
PERCENTAGE OF AREA FOR TYPE Mountain IS 0.00%

TOTAL EDGE LENGTH: 22.8326 IN.

LINEAR EDGES BETWEEN TYPES (INCHES)

	Man-Made	Grass	Trees	Road	Water	Sky	Soil	Mountain
Man-Made	0.0000	2.9478	0.2589	0.0000	0.0000	0.0000	0.0000	0.0000
Grass	2.9478	6.3329	9.1909	2.8628	0.0000	0.0000	1.2393	0.0000
Trees	0.2589	9.1909	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Road	0.0000	2.8628	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Sky	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Soil	0.0000	1.2393	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mountain	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

NUMBER OF VEHICLES: 0

GREEN VEGETATION PRESENT: YES

(Continued)

C27

Table D4 (Continued)

Scene #8 TOTAL AREA: 9.5781 SQ IN.

RECORD NUMBER	AREA OR OBJECT	CHARACTERISTIC	COLOR	POLYGON AREA (SQ IN.)	PERCENTAGE OF AREA	POLYGON PERIMETER (INCHES)
2	Trees	Leaves On	Green	0.6672	6.97	6.5474
3	Man-Made	Building	White	0.0071	0.07	0.3398
4	Trees	Leaves On	Green	0.0101	0.11	0.4245
5	Grass	Bushy Area	Green	0.0910	0.95	1.5466
6	Grass	Bushy Area	Green	1.4889	15.54	15.8656
7	Trees	Leaves On	Green	0.0282	0.29	0.7338
8	Man-Made	Telephone Pole	Brown	0.0061	0.06	0.4575
9	Man-Made	Telephone Pole	Brown	0.0057	0.06	0.4060
10	Man-Made	Telephone Pole	Brown	0.0041	0.04	0.3541
11	Trees	Leaves On	Green	0.0164	0.17	0.5058
12	Road	Dirt	Sandy	0.0379	0.40	2.0629
13	Soil	Sandy Area	Green	0.7319	7.64	6.2841
14	Trees	Leaves On	Green	1.4352	14.98	7.1450
15	Grass	Bushy Area	Green	1.4479	15.12	7.1069
16	Grass	Short Field	Green	0.2733	2.85	6.6080
17	Grass	Bushy Area	Green	3.3273	34.74	8.4642

NUMBER OF POLYGONS: 16

DIFFERENT TYPES OF OBJECTS: 5

PERCENTAGE OF AREA FOR TYPE Man-Made IS 0.24%
PERCENTAGE OF AREA FOR TYPE Grass IS 69.20%
PERCENTAGE OF AREA FOR TYPE Trees IS 22.52%
PERCENTAGE OF AREA FOR TYPE Road IS 0.40%
PERCENTAGE OF AREA FOR TYPE Water IS 0.00%
PERCENTAGE OF AREA FOR TYPE Sky IS 0.00%
PERCENTAGE OF AREA FOR TYPE Soil IS 7.64%
PERCENTAGE OF AREA FOR TYPE Mountain IS 0.00%

TOTAL EDGE LENGTH: 26.2365 IN.

LINEAR EDGES BETWEEN TYPES (INCHES)

	Man-Made	Grass	Trees	Road	Water	Sky	Soil	Mountain
Man-Made	0.0000	1.1895	0.2793	0.0000	0.0000	0.0000	0.0000	0.0000
Grass	1.1895	6.3662	10.3277	1.5892	0.0000	0.0000	6.0537	0.0000
Trees	0.2793	10.3277	0.0000	0.4309	0.0000	0.0000	0.0000	0.0000
Road	0.0000	1.5892	0.4309	0.0000	0.0000	0.0000	0.0000	0.0000
Water	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Sky	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Soil	0.0000	6.0537	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mountain	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

NUMBER OF VENICLES: 0

GREEN VEGETATION PRESENT: YES

(Continued)

Table D4 (Continued)

Scene #9 TOTAL AREA: 9.5228 SQ IN.

RECORD NUMBER	AREA OR OBJECT	CHARACTERISTIC	COLOR	POLYGON AREA (SQ IN.)	PERCENTAGE OF AREA	POLYGON PERIMETER (INCHES)
2	Trees	Leaves On	Green	0.5908	6.20	7.5294
3	Grass	Bushy Area	Green	2.2367	23.49	8.7470
4	Trees	Leaves On	Green	1.6508	17.34	7.4873
5	Grass	Bushy Area	Green	2.9346	30.82	15.9538
6	Grass	Short Field	Green	0.1406	1.48	3.6943
7	Grass	Short Field	Green	0.1167	1.23	2.4116
8	Grass	Short Field	Green	0.2369	2.49	6.3993
9	Grass	Bushy Area	Green	1.6157	16.97	7.2735

NUMBER OF POLYGONS: 8

DIFFERENT TYPES OF OBJECTS: 2

PERCENTAGE OF AREA FOR TYPE Man-Made IS 0.00%
PERCENTAGE OF AREA FOR TYPE Grass IS 76.46%
PERCENTAGE OF AREA FOR TYPE Trees IS 23.54%
PERCENTAGE OF AREA FOR TYPE Road IS 0.00%
PERCENTAGE OF AREA FOR TYPE Water IS 0.00%
PERCENTAGE OF AREA FOR TYPE Sky IS 0.00%
PERCENTAGE OF AREA FOR TYPE Soil IS 0.00%
PERCENTAGE OF AREA FOR TYPE Mountain IS 0.00%

TOTAL EDGE LENGTH: 22.5756 IN.

LINEAR EDGES BETWEEN TYPES (INCHES)

	Man-Made	Grass	Trees	Road	Water	Sky	Soil	Mountain
Man-Made	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Grass	0.0000	12.1588	10.4168	0.0000	0.0000	0.0000	0.0000	0.0000
Trees	0.0000	10.4168	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Sky	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Soil	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mountain	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

NUMBER OF VEHICLES: 0

GREEN VEGETATION PRESENT: YES

(Continued)

Table D4 (Continued)

Scene #10 TOTAL AREA: 9.5044 SQ IN.

RECORD NUMBER	AREA OR OBJECT	CHARACTERISTIC	COLOR	POLYGON AREA (SQ IN.)	PERCENTAGE OF AREA	POLYGON PERIMETER (INCHES)
2	Sky	None	Gray	0.0139	0.15	0.9862
3	Trees	Leaves On	Green	0.0648	0.68	1.5619
4	Man-Made	Metal Pole	Gray	0.0414	0.44	0.8470
5	Trees	Leaves On	Green	0.2866	3.02	6.5264
6	Grass	Bushy Area	Green	2.7178	28.60	12.2046
7	Grass	Bushy Area	Green	0.0702	0.74	1.7493
8	Trees	Leaves On	Green	0.1574	1.66	3.2718
9	Trees	Leaves On	Green	0.0556	0.59	0.9683
10	Trees	Leaves On	Green	1.3524	14.23	7.5248
11	Grass	Bushy Area	Green	3.5212	37.05	8.4282
12	Grass	Short Field	Green	0.2517	2.65	6.6378
13	Grass	Bushy Area	Green	0.9714	10.22	6.8970

NUMBER OF POLYGONS: 12

DIFFERENT TYPES OF OBJECTS: 4

PERCENTAGE OF AREA FOR TYPE Man-Made IS 0.44%
PERCENTAGE OF AREA FOR TYPE Grass IS 79.25%
PERCENTAGE OF AREA FOR TYPE Trees IS 20.17%
PERCENTAGE OF AREA FOR TYPE Road IS 0.00%
PERCENTAGE OF AREA FOR TYPE Water IS 0.00%
PERCENTAGE OF AREA FOR TYPE Sky IS 0.15%
PERCENTAGE OF AREA FOR TYPE Soil IS 0.00%
PERCENTAGE OF AREA FOR TYPE Mountain IS 0.00%

TOTAL EDGE LENGTH: 22.6359 IN.

LINEAR EDGES BETWEEN TYPES (INCHES)

	Man-Made	Grass	Trees	Road	Water	Sky	Soil	Mountain
Man-Made	0.0000	0.3396	0.3482	0.0000	0.0000	0.0000	0.0000	0.0000
Grass	0.3396	6.3776	15.0851	0.0000	0.0000	0.0000	0.0000	0.0000
Trees	0.3482	15.0851	0.0000	0.0000	0.0000	0.4855	0.0000	0.0000
Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Sky	0.0000	0.0000	0.4855	0.0000	0.0000	0.0000	0.0000	0.0000
Soil	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mountain	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

NUMBER OF VEHICLES: 0

GREEN VEGETATION PRESENT: YES

(Continued)

Table D4 (Continued)

Scene #11 TOTAL AREA: 9.5525 SQ IN.

RECORD NUMBER	AREA OR OBJECT	CHARACTERISTIC	COLOR	POLYGON AREA (SQ IN.)	PERCENTAGE OF AREA	POLYGON PERIMETER (INCHES)
2	Trees	Leaves On	Green	0.2471	2.59	4.6848
3	Man-Made	Metal Pole	Gray	0.0132	0.14	0.5477
4	Trees	Leaves On	Green	0.0429	0.45	2.1385
5	Soil	Sandy Area	Sandy	0.0170	0.18	0.7548
6	Grass	Bushy Area	Green	2.2545	23.60	13.5998
7	Trees	Leaves On	Green	0.1047	1.10	2.5169
8	Trees	Leaves On	Green	0.0302	0.32	0.8598
9	Trees	Leaves On	Green	0.0478	0.50	1.1142
10	Trees	Leaves On	Green	0.0143	0.15	0.4769
11	Trees	Leaves On	Green	2.2944	24.02	7.8236
12	Grass	Bushy Area	Green	4.4863	46.97	9.1888

NUMBER OF POLYGONS: 11

DIFFERENT TYPES OF OBJECTS: 4

PERCENTAGE OF AREA FOR TYPE Man-Made IS 0.14%
PERCENTAGE OF AREA FOR TYPE Grass IS 70.57%
PERCENTAGE OF AREA FOR TYPE Trees IS 29.12%
PERCENTAGE OF AREA FOR TYPE Road IS 0.00%
PERCENTAGE OF AREA FOR TYPE Water IS 0.00%
PERCENTAGE OF AREA FOR TYPE Sky IS 0.00%
PERCENTAGE OF AREA FOR TYPE Soil IS 0.18%
PERCENTAGE OF AREA FOR TYPE Mountain IS 0.00%

TOTAL EDGE LENGTH: 15.6706 IN.

LINEAR EDGES BETWEEN TYPES (INCHES)

	Man-Made	Grass	Trees	Road	Water	Sky	Soil	Mountain
Man-Made	0.0000	0.3174	0.1184	0.0000	0.0000	0.0000	0.0000	0.0000
Grass	0.3174	0.0000	14.4800	0.0000	0.0000	0.0000	0.3612	0.0000
Trees	0.1184	14.4800	0.0000	0.0000	0.0000	0.0000	0.3936	0.0000
Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Sky	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Soil	0.0000	0.3612	0.3936	0.0000	0.0000	0.0000	0.0000	0.0000
Mountain	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

NUMBER OF VEHICLES: 0

GREEN VEGETATION PRESENT: YES

(Continued)

Table D4 (Continued)

Scene #12 TOTAL AREA: 9.4873 SQ IN.

RECORD NUMBER	AREA OR OBJECT	CHARACTERISTIC	COLOR	POLYGON AREA (SQ IN.)	PERCENTAGE OF AREA	POLYGON PERIMETER (INCHES)
2	Sky	None	Gray	0.1127	1.19	6.2301
3	Trees	Leaves On	Green	0.2783	2.93	6.4130
4	Grass	Bushy Area	Green	2.1475	22.64	13.2273
5	Man-Made	Concrete	Gray	0.1917	2.02	3.8683
6	Man-Made	Concrete	Gray	0.0169	0.18	0.5101
7	Man-Made	Concrete	Gray	0.0095	0.10	0.3814
8	Trees	Leaves On	Green	2.2399	23.61	8.1666
9	Soil	Sandy Area	Sandy	0.2403	2.53	2.3544
10	Grass	Bushy Area	Green	3.9776	41.92	15.1076
11	Grass	Short Field	Green	0.2728	2.88	6.3666

NUMBER OF POLYGONS: 10

DIFFERENT TYPES OF OBJECTS: 5

PERCENTAGE OF AREA FOR TYPE Man-Made IS 2.30%
PERCENTAGE OF AREA FOR TYPE Grass IS 67.44%
PERCENTAGE OF AREA FOR TYPE Trees IS 26.54%
PERCENTAGE OF AREA FOR TYPE Road IS 0.00%
PERCENTAGE OF AREA FOR TYPE Water IS 0.00%
PERCENTAGE OF AREA FOR TYPE Sky IS 1.19%
PERCENTAGE OF AREA FOR TYPE Soil IS 2.53%
PERCENTAGE OF AREA FOR TYPE Mountain IS 0.00%

TOTAL EDGE LENGTH: 25.1521 IN.

LINEAR EDGES BETWEEN TYPES (INCHES)

	Man-Made	Grass	Trees	Road	Water	Sky	Soil	Mountain
Man-Made	0.0000	4.7598	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Grass	4.7598	6.2717	8.9764	0.0000	0.0000	0.0000	0.9430	0.0000
Trees	0.0000	8.9764	0.0000	0.0000	0.0000	3.1311	1.0700	0.0000
Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Sky	0.0000	0.0000	3.1311	0.0000	0.0000	0.0000	0.0000	0.0000
Soil	0.0000	0.9430	1.0700	0.0000	0.0000	0.0000	0.0000	0.0000
Mountain	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

NUMBER OF VEHICLES: 0

GREEN VEGETATION PRESENT: YES

(Continued)

Table D4 (Continued)

Scene #13 TOTAL AREA: 9.5448 SQ IN.

RECORD NUMBER	AREA OR OBJECT	CHARACTERISTIC	COLOR	POLYGON AREA (SQ IN.)	PERCENTAGE OF AREA	POLYGON PERIMETER (INCHES)
2	Trees	Leaves On	Green	0.0156	0.16	1.2972
3	Grass	Bushy Area	Green	2.0547	21.53	10.1535
4	Man-Made	Concrete	Gray	0.0228	0.24	0.6028
5	Trees	Leaves On	Green	0.1830	1.92	4.8784
6	Man-Made	Concrete	Gray	0.0085	0.09	0.3706
7	Soil	Sandy Area	Sandy	0.0146	0.15	0.7662
8	Soil	Sandy Area	Sandy	0.0757	0.79	1.6092
9	Man-Made	Concrete	Gray	0.0027	0.03	0.1966
10	Soil	Sandy Area	Sandy	0.0472	0.49	1.7237
11	Soil	Sandy Area	Sandy	0.0197	0.21	0.9816
12	Trees	Leaves On	Green	1.8473	19.35	9.5203
13	Soil	Sandy Area	Sandy	0.0360	0.38	1.0477
14	Soil	Sandy Area	Sandy	0.1874	1.96	2.7559
15	Soil	Sandy Area	Sandy	0.1115	1.17	1.5273
16	Trees	Leaves On	Green	0.0272	0.29	0.7048
17	Grass	Bushy Area	Green	4.8908	51.24	9.3499

NUMBER OF POLYGONS: 16

DIFFERENT TYPES OF OBJECTS: 4

PERCENTAGE OF AREA FOR TYPE Man-Made IS 0.36%
PERCENTAGE OF AREA FOR TYPE Grass IS 72.77%
PERCENTAGE OF AREA FOR TYPE Trees IS 21.72%
PERCENTAGE OF AREA FOR TYPE Road IS 0.00%
PERCENTAGE OF AREA FOR TYPE Water IS 0.00%
PERCENTAGE OF AREA FOR TYPE Sky IS 0.00%
PERCENTAGE OF AREA FOR TYPE Soil IS 5.16%
PERCENTAGE OF AREA FOR TYPE Mountain IS 0.00%

TOTAL EDGE LENGTH: 17.5639 IN.

LINEAR EDGES BETWEEN TYPES (INCHES)

	Man-Made	Grass	Trees	Road	Water	Sky	Soil	Mountain
Man-Made	0.0000	0.4945	0.3909	0.0000	0.0000	0.0000	0.0384	0.0000
Grass	0.4945	0.0000	6.8935	0.0000	0.0000	0.0000	4.2360	0.0000
Trees	0.3909	6.8935	0.0000	0.0000	0.0000	0.0000	5.5108	0.0000
Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Sky	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Soil	0.0384	4.2360	5.5108	0.0000	0.0000	0.0000	0.0000	0.0000
Mountain	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

NUMBER OF VEHICLES: 0
GREEN VEGETATION PRESENT: YES

(Continued)

Table D4 (Continued)

Scene #14 TOTAL AREA: 9.5083 SQ IN.

RECORD NUMBER	AREA OR OBJECT	CHARACTERISTIC	COLOR	POLYGON AREA (SQ IN.)	PERCENTAGE OF AREA	POLYGON PERIMETER (INCHES)
2	Grass	Bushy Area	Green	1.8053	18.99	16.0637
3	Trees	Leaves On	Green	0.0473	0.50	2.5618
4	Trees	Leaves On	Green	0.0342	0.36	1.5354
5	Trees	Leaves On	Green	0.0812	0.85	2.4300
6	Man-Made	Concrete	Gray	0.0013	0.01	0.1446
7	Trees	Leaves On	Green	0.0308	0.32	1.1896
8	Trees	Leaves On	Green	0.0734	0.77	3.1924
9	Man-Made	Concrete	Gray	0.0050	0.05	0.2938
10	Grass	Bushy Area	Green	0.0556	0.58	1.5023
11	Man-Made	Concrete	Gray	0.0083	0.09	0.3618
12	Trees	Leaves On	Green	0.1481	1.56	2.6058
13	Trees	Leaves On	Green	2.1187	22.28	8.6748
14	Man-Made	Concrete	Gray	0.0070	0.07	0.3283
15	Soil	Sandy Area	Sandy	0.0030	0.03	0.2333
16	Soil	Sandy Area	Sandy	0.1508	1.59	1.9897
17	Grass	Bushy Area	Green	2.8596	30.07	12.5107
18	Grass	Short Field	Green	0.9607	10.10	10.2559
19	Grass	Bushy Area	Green	1.1180	11.76	5.5006

NUMBER OF POLYGONS: 18

DIFFERENT TYPES OF OBJECTS: 4

PERCENTAGE OF AREA FOR TYPE Man-Made IS 0.23%
PERCENTAGE OF AREA FOR TYPE Grass IS 71.51%
PERCENTAGE OF AREA FOR TYPE Trees IS 26.65%
PERCENTAGE OF AREA FOR TYPE Road IS 0.00%
PERCENTAGE OF AREA FOR TYPE Water IS 0.00%
PERCENTAGE OF AREA FOR TYPE Sky IS 0.00%
PERCENTAGE OF AREA FOR TYPE Soil IS 1.62%
PERCENTAGE OF AREA FOR TYPE Mountain IS 0.00%

TOTAL EDGE LENGTH: 29.5194 IN.

LINEAR EDGES BETWEEN TYPES (INCHES)

	Man-Made	Grass	Trees	Road	Water	Sky	Soil	Mountain
Man-Made	0.0000	0.7856	0.2921	0.0000	0.0000	0.0000	0.0000	0.0000
Grass	0.7856	9.3890	17.0143	0.0000	0.0000	0.0000	0.6921	0.0000
Trees	0.2921	17.0143	0.1749	0.0000	0.0000	0.0000	1.1715	0.0000
Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Sky	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Soil	0.0000	0.6921	1.1715	0.0000	0.0000	0.0000	0.0000	0.0000
Mountain	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

NUMBER OF VEHICLES: 0
GREEN VEGETATION PRESENT: YES

(Continued)

Table D4 (Continued)

Scene #15 EG150891 TOTAL AREA: 9.5072 SQ IN.

RECORD NUMBER	AREA OR OBJECT	CHARACTERISTIC	COLOR	POLYGON AREA (SQ IN.)	PERCENTAGE OF AREA	POLYGON PERIMETER (INCHES)
2	Trees	Leaves On	Green	0.1544	1.62	6.3203
3	Soil	Sandy Area	Sandy	0.0390	0.41	2.1218
4	Grass	Bushy Area	Green	1.9796	20.82	15.0567
5	Road	Dirt	Sandy	0.0133	0.14	0.5272
6	Soil	Sandy Area	Sandy	0.0519	0.55	2.1642
7	Road	Dirt	Sandy	0.0240	0.25	0.7405
8	Road	Dirt	Sandy	0.0127	0.13	0.5360
9	Road	Dirt	Sandy	0.0094	0.1	0.4875
10	Trees	Leaves On	Green	0.0104	0.11	0.4004
11	Man-Made	Concrete	Gray	0.0077	0.08	0.3302
12	Man-Made	Concrete	Gray	0.0039	0.04	0.2416
13	Road	Dirt	Sandy	0.0035	0.04	0.2435
14	Road	Dirt	Sandy	0.0048	0.05	0.3205
15	Road	Dirt	Sandy	0.0076	0.08	0.3544
16	Man-Made	Concrete	Gray	0.0107	0.11	0.4217
17	Man-Made	Concrete	Gray	0.0072	0.08	0.3706
18	Trees	Leaves On	Green	2.2538	23.71	9.2612
19	Soil	Sandy Area	Sandy	0.0073	0.08	0.3425
20	Soil	Sandy Area	Sandy	0.0067	0.07	0.3282
21	Grass	Bushy Area	Green	1.5511	16.32	7.4969
22	Grass	Short Field	Green	0.3819	4.02	7.6902
23	Grass	Bushy Area	Green	0.5497	5.78	7.9307
24	Grass	Short Field	Green	0.5394	5.67	7.0698
25	Grass	Bushy Area	Green	1.8770	19.74	7.5491

NUMBER OF POLYGONS: 24
DIFFERENT TYPES OF OBJECTS: 5

PERCENTAGE OF AREA FOR TYPE Man-Made IS 0.31%
PERCENTAGE OF AREA FOR TYPE Grass IS 72.35%
PERCENTAGE OF AREA FOR TYPE Trees IS 25.44%
PERCENTAGE OF AREA FOR TYPE Road IS 0.79%
PERCENTAGE OF AREA FOR TYPE Water IS 0.00%
PERCENTAGE OF AREA FOR TYPE Sky IS 0.00%
PERCENTAGE OF AREA FOR TYPE Soil IS 1.10%
PERCENTAGE OF AREA FOR TYPE Mountain IS 0.00%

TOTAL EDGE LENGTH: 32.9856 IN.

LINEAR EDGES BETWEEN TYPES (INCHES)

	Man-Made	Grass	Trees	Road	Water	Sky	Soil	Mountain
Man-Made	0.0000	1.2298	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Grass	1.2298	14.2070	9.5604	3.2096	0.0000	0.0000	3.1398	0.0000
Trees	0.0000	9.5604	0.0000	0.0000	0.0000	0.0000	1.6390	0.0000
Road	0.0000	3.2096	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Sky	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Soil	0.0000	3.1398	1.6390	0.0000	0.0000	0.0000	0.0000	0.0000
Mountain	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

NUMBER OF VEHICLES: 0
GREEN VEGETATION PRESENT: YES

(Continued)

Table D4 (Continued)

Scene #16 TOTAL AREA: 9.5037 SQ IN.

RECORD NUMBER	AREA OR OBJECT	CHARACTERISTIC	COLOR	POLYGON AREA (SQ IN.)	PERCENTAGE OF AREA	POLYGON PERIMETER (INCHES)
2	Trees	Leaves On	Green	0.1840	1.94	6.1924
3	Grass	Bushy Area	Green	2.4996	26.30	12.5826
4	Road	Dirt	Sandy	0.0150	0.16	0.6971
5	Road	Dirt	Sandy	0.0057	0.06	0.3410
6	Road	Dirt	Sandy	0.0178	0.19	0.7612
7	Man-Made	Concrete	Gray	0.0285	0.30	0.7286
8	Man-Made	Concrete	Gray	0.0041	0.04	0.2459
9	Road	Dirt	Sandy	0.0053	0.06	0.3507
10	Man-Made	Concrete	Gray	0.0044	0.05	0.2519
11	Road	Dirt	Sandy	0.0126	0.13	0.4906
12	Man-Made	Concrete	Gray	0.0361	0.38	0.8140
13	Trees	Leaves On	Green	1.8918	19.91	8.4414
14	Soil	Sandy Area	Sandy	0.0161	0.17	0.6404
15	Soil	Sandy Area	Sandy	0.0099	0.10	0.3944
16	Grass	Bushy Area	Green	1.4895	15.67	7.3696
17	Grass	Short Field	Green	0.2636	2.77	6.8670
18	Grass	Bushy Area	Green	0.5275	5.55	6.8804
19	Grass	Short Field	Green	0.5516	5.80	6.9585
20	Grass	Bushy Area	Green	1.9406	20.42	7.7825

NUMBER OF POLYGONS: 19
DIFFERENT TYPES OF OBJECTS: 5

PERCENTAGE OF AREA FOR TYPE Man-Made IS 0.77%
PERCENTAGE OF AREA FOR TYPE Grass IS 76.52%
PERCENTAGE OF AREA FOR TYPE Trees IS 21.84%
PERCENTAGE OF AREA FOR TYPE Road IS 0.59%
PERCENTAGE OF AREA FOR TYPE Water IS 0.00%
PERCENTAGE OF AREA FOR TYPE Sky IS 0.00%
PERCENTAGE OF AREA FOR TYPE Soil IS 0.27%
PERCENTAGE OF AREA FOR TYPE Mountain IS 0.00%

TOTAL EDGE LENGTH: 28.2285 IN.

LINEAR EDGES BETWEEN TYPES (INCHES)

	Man-Made	Grass	Trees	Road	Water	Sky	Soil	Mountain
Man-Made	0.0000	2.0404	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Grass	2.0404	13.2792	9.2894	2.6406	0.0000	0.0000	0.0000	0.0000
Trees	0.0000	9.2894	0.0000	0.0000	0.0000	0.0000	0.9789	0.0000
Road	0.0000	2.6406	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Sky	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Soil	0.0000	0.0000	0.9789	0.0000	0.0000	0.0000	0.0000	0.0000
Mountain	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

NUMBER OF VEHICLES: 0
GREEN VEGETATION PRESENT: YES

(Continued)

Table D4 (Continued)

Scene #17 TOTAL AREA: 9.5443 SQ IN.

RECORD NUMBER	AREA OR OBJECT	CHARACTERISTIC	COLOR	POLYGON AREA (SQ IN.)	PERCENTAGE OF AREA	POLYGON PERIMETER (INCHES)
2	Trees	Leaves On	Green	0.2267	2.38	6.2368
3	Grass	Bushy Area	Green	3.4474	36.12	11.3269
4	Man-Made	Concrete	Gray	0.0023	0.02	0.1925
5	Man-Made	Concrete	Gray	0.0083	0.09	0.3444
6	Road	Dirt	Sandy	0.0050	0.05	0.3650
7	Road	Dirt	Sandy	0.0199	0.21	0.9067
8	Man-Made	Concrete	Gray	0.0218	0.23	0.6226
9	Trees	Leaves On	Green	0.0160	0.17	0.5159
10	Trees	Leaves On	Green	0.8641	9.05	7.1542
11	Grass	Bushy Area	Green	1.4927	15.64	7.1711
12	Grass	Short Field	Green	0.1878	1.97	6.6918
13	Grass	Bushy Area	Green	0.5525	5.79	6.9801
14	Grass	Short Field	Green	0.4110	4.31	6.8631
15	Grass	Bushy Area	Green	2.2888	23.98	7.8160

NUMBER OF POLYGONS: 14
DIFFERENT TYPES OF OBJECTS: 4

PERCENTAGE OF AREA FOR TYPE Man-Made IS 0.34%
PERCENTAGE OF AREA FOR TYPE Grass IS 87.30%
PERCENTAGE OF AREA FOR TYPE Trees IS 11.60%
PERCENTAGE OF AREA FOR TYPE Road IS 0.26%
PERCENTAGE OF AREA FOR TYPE Water IS 0.00%
PERCENTAGE OF AREA FOR TYPE Sky IS 0.00%
PERCENTAGE OF AREA FOR TYPE Soil IS 0.00%
PERCENTAGE OF AREA FOR TYPE Mountain IS 0.00%

TOTAL EDGE LENGTH: 25.4137 IN.

LINEAR EDGES BETWEEN TYPES (INCHES)

	Man-Made	Grass	Trees	Road	Water	Sky	Soil	Mountain
Man-Made	0.0000	1.0105	0.1490	0.0000	0.0000	0.0000	0.0000	0.0000
Grass	1.0105	13.0921	9.9257	1.1783	0.0000	0.0000	0.0000	0.0000
Trees	0.1490	9.9257	0.0000	0.0581	0.0000	0.0000	0.0000	0.0000
Road	0.0000	1.1783	0.0581	0.0000	0.0000	0.0000	0.0000	0.0000
Water	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Sky	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Soil	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mountain	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

NUMBER OF VEHICLES: 0

GREEN VEGETATION PRESENT: YES

(Continued)

Table D4 (Continued)

Scene #18 TOTAL AREA: 9.5324 SQ IN.

RECORD NUMBER	AREA OR OBJECT	CHARACTERISTIC	COLOR	POLYGON AREA (SQ IN.)	PERCENTAGE OF AREA	POLYGON PERIMETER (INCHES)
2	Trees	Leaves On	Green	0.4472	4.69	6.4026
3	Grass	Bushy Area	Green	5.6383	59.15	16.7949
4	Trees	Leaves On	Green	0.0214	0.22	0.6055
5	Trees	Leaves On	Green	0.1353	1.42	2.6986
6	Man-Made	Building	White	0.0191	0.20	0.5721
7	Trees	Leaves On	Green	0.0277	0.29	0.7651
8	Trees	Leaves On	Green	0.0150	0.16	0.5357
9	Soil	Sandy Area	Sandy	0.0140	0.15	0.6924
10	Soil	Sandy Area	Sandy	0.0186	0.19	0.8564
11	Soil	Sandy Area	Sandy	0.0092	0.1	0.4565
12	Grass	Short Field	Green	0.0287	0.30	0.8434
13	Grass	Short Field	Green	0.9506	9.97	7.8591
14	Grass	Bushy Area	Green	0.0392	0.41	0.8702
15	Grass	Bushy Area	Green	2.1682	22.75	7.4858

NUMBER OF POLYGONS: 14

DIFFERENT TYPES OF OBJECTS: 4

PERCENTAGE OF AREA FOR TYPE Man-Made IS 0.20%
PERCENTAGE OF AREA FOR TYPE Grass IS 92.58%
PERCENTAGE OF AREA FOR TYPE Trees IS 6.78%
PERCENTAGE OF AREA FOR TYPE Road IS 0.00%
PERCENTAGE OF AREA FOR TYPE Water IS 0.00%
PERCENTAGE OF AREA FOR TYPE Sky IS 0.00%
PERCENTAGE OF AREA FOR TYPE Soil IS 0.44%
PERCENTAGE OF AREA FOR TYPE Mountain IS 0.00%

TOTAL EDGE LENGTH: 17.5434 IN.

LINEAR EDGES BETWEEN TYPES (INCHES)

	Man-Made	Grass	Trees	Road	Water	Sky	Soil	Mountain
Man-Made	0.0000	0.3766	0.1955	0.0000	0.0000	0.0000	0.0000	0.0000
Grass	0.3766	7.8662	7.0998	0.0000	0.0000	0.0000	1.7319	0.0000
Trees	0.1955	7.0998	0.0000	0.0000	0.0000	0.0000	0.2734	0.0000
Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Sky	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Soil	0.0000	1.7319	0.2734	0.0000	0.0000	0.0000	0.0000	0.0000
Mountain	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

NUMBER OF VEHICLES: 0

GREEN VEGETATION PRESENT: YES

(Continued)

Table 04 (Continued)

Scene #19 TOTAL AREA: 9.5538 SQ IN.

RECORD NUMBER	AREA OR OBJECT	CHARACTERISTIC	COLOR	POLYGON AREA (SQ IN.)	PERCENTAGE OF AREA	POLYGON PERIMETER (INCHES)
2	Trees	Leaves On	Green	0.4802	5.03	6.4679
3	Grass	Bushy Area	Green	0.9901	10.36	9.4510
4	Trees	Leaves On	Green	0.3422	3.58	6.8403
5	Trees	Leaves On	Green	0.0426	0.45	1.3155
6	Grass	Bushy Area	Green	0.0194	0.20	0.8059
7	Grass	Bushy Area	Green	0.0042	0.04	0.2736
8	Trees	Leaves On	Green	0.1208	1.26	2.0110
9	Grass	Bushy Area	Green	4.2618	44.61	9.8553
10	Soil	Sandy Area	Sandy	0.1343	1.41	3.2503
11	Soil	Sandy Area	Sandy	0.1245	1.30	2.4244
12	Trees	Leaves On	Green	0.0457	0.48	1.2017
13	Trees	Leaves On	Green	0.0256	0.27	0.6925
14	Grass	Short Field	Green	1.5290	16.00	9.4072
15	Grass	Bushy Area	Green	1.4334	15.00	9.7663

NUMBER OF POLYGONS: 14

DIFFERENT TYPES OF OBJECTS: 3

PERCENTAGE OF AREA FOR TYPE Man-Made IS 0.00%
PERCENTAGE OF AREA FOR TYPE Grass IS 86.23%
PERCENTAGE OF AREA FOR TYPE Trees IS 11.06%
PERCENTAGE OF AREA FOR TYPE Road IS 0.00%
PERCENTAGE OF AREA FOR TYPE Water IS 0.00%
PERCENTAGE OF AREA FOR TYPE Sky IS 0.00%
PERCENTAGE OF AREA FOR TYPE Soil IS 2.71%
PERCENTAGE OF AREA FOR TYPE Mountain IS 0.00%

TOTAL EDGE LENGTH: 25.6987 IN.

LINEAR EDGES BETWEEN TYPES (INCHES)

	Man-Made	Grass	Trees	Road	Water	Sky	Soil	Mountain
Man-Made	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Grass	0.0000	8.6581	11.1426	0.0000	0.0000	0.0000	2.4863	0.0000
Trees	0.0000	11.1426	0.3474	0.0000	0.0000	0.0000	3.0643	0.0000
Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Sky	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Soil	0.0000	2.4863	3.0643	0.0000	0.0000	0.0000	0.0000	0.0000
Mountain	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

NUMBER OF VEHICLES: 0

GREEN VEGETATION PRESENT: YES

(Continued)

Table D4 (Concluded)

Scene #20 TOTAL AREA: 9.5538 SQ IN.

RECORD NUMBER	AREA OR OBJECT	CHARACTERISTIC	COLOR	POLYGON AREA (SQ IN.)	PERCENTAGE OF AREA	POLYGON PERIMETER (INCHES)
2	Trees	Leaves On	Green	0.6335	6.63	6.5787
3	Grass	Bushy Area	Green	1.0804	11.31	8.7392
4	Trees	Leaves On	Green	0.0197	0.21	0.6683
5	Trees	Leaves On	Green	1.3998	14.65	8.2593
6	Trees	Leaves On	Green	0.0089	0.09	0.3535
7	Trees	Leaves On	Green	0.0120	0.13	0.5948
8	Soil	Sandy Area	Sandy	0.0105	0.11	0.5469
9	Soil	Sandy Area	Sandy	0.0032	0.03	0.2863
10	Soil	Sandy Area	Sandy	0.0052	0.05	0.3216
11	Soil	Sandy Area	Sandy	0.1685	1.76	3.8526
12	Trees	Leaves On	Green	0.1152	1.21	1.6145
13	Grass	Bushy Area	Green	3.3537	35.21	11.3060
14	Trees	Leaves On	Green	0.0197	0.21	0.5347
15	Man-Made	Concrete	Gray	0.0075	0.08	0.3373
16	Man-Made	Concrete	Gray	0.0070	0.07	0.3137
17	Grass	Short Field	Green	0.0247	0.26	1.2726
18	Grass	Short Field	Green	0.4398	4.60	6.9643
19	Grass	Bushy Area	Green	1.7255	18.06	12.4707
20	Grass	Short Field	Green	0.5091	5.33	5.8445

NUMBER OF POLYGONS: 19
DIFFERENT TYPES OF OBJECTS: 4

PERCENTAGE OF AREA FOR TYPE Man-Made IS 0.15%
PERCENTAGE OF AREA FOR TYPE Grass IS 74.77%
PERCENTAGE OF AREA FOR TYPE Trees IS 23.12%
PERCENTAGE OF AREA FOR TYPE Road IS 0.00%
PERCENTAGE OF AREA FOR TYPE Water IS 0.00%
PERCENTAGE OF AREA FOR TYPE Sky IS 0.00%
PERCENTAGE OF AREA FOR TYPE Soil IS 1.96%
PERCENTAGE OF AREA FOR TYPE Mountain IS 0.00%

TOTAL EDGE LENGTH: 29.2440 IN.

LINEAR EDGES BETWEEN TYPES (INCHES)

	Man-Made	Grass	Trees	Road	Water	Sky	Soil	Mountain
Man-Made	0.0000	0.6510	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Grass	0.6510	13.0787	10.7957	0.0000	0.0000	0.0000	0.9936	0.0000
Trees	0.0000	10.7957	0.0000	0.0000	0.0000	0.0000	3.7250	0.0000
Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Sky	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Soil	0.0000	0.9936	3.7250	0.0000	0.0000	0.0000	0.0000	0.0000
Mountain	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

NUMBER OF VEHICLES: 0
GREEN VEGETATION PRESENT: YES

Appendix E
Yuma Proving Ground, AZ

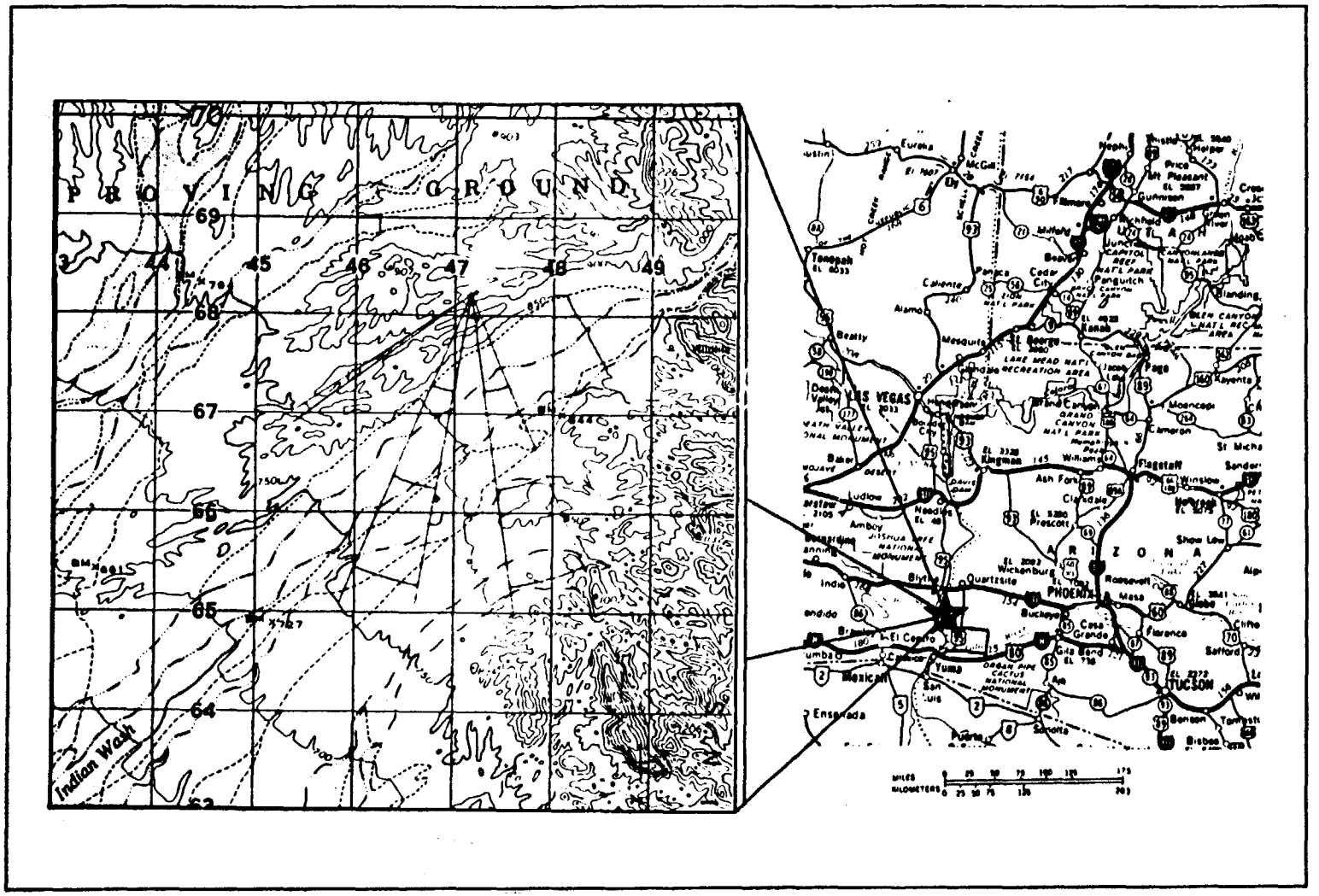
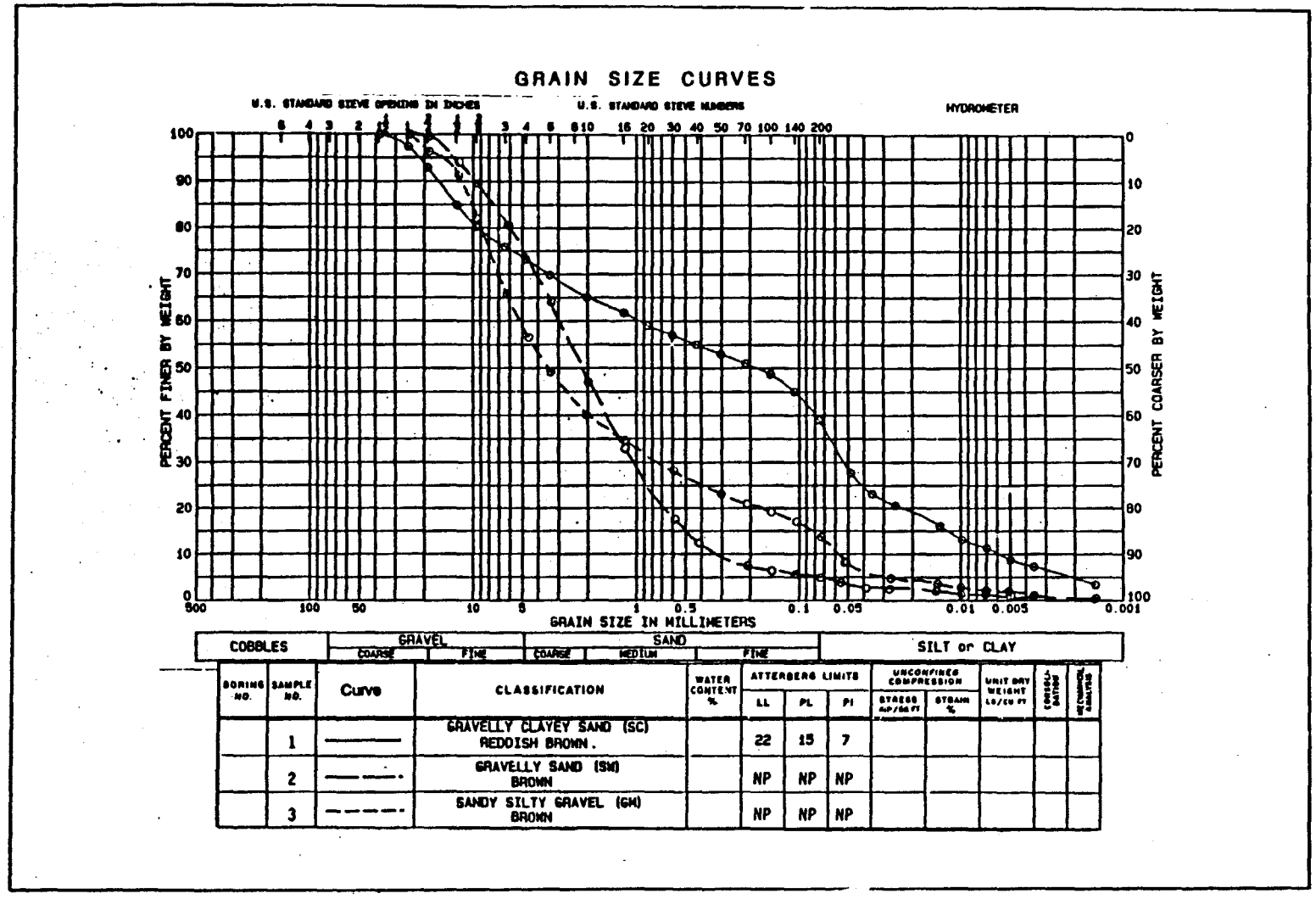


Figure E1. Site location and ground truth locations



BORING NO.	SAMPLE NO.	Curve	CLASSIFICATION	WATER CONTENT %	ATTERBERG LIMITS LL	PL	PI	UNCONFINED COMPRESSION STRESS KIP/SQ FT	STRAIN %	UNIT DRY WEIGHT LB/CU FT	CONSOLIDATION	MECHANICAL ANALYSIS
	1	———	GRAVELLY CLAYEY SAND (SC) REDDISH BROWN.		22	15	7					
	2	— — — ·	GRAVELLY SAND (SM) BROWN		NP	NP	NP					
	3	- - - - -	SANDY SILTY GRAVEL (GM) BROWN		NP	NP	NP					

Figure E2. Soils laboratory report

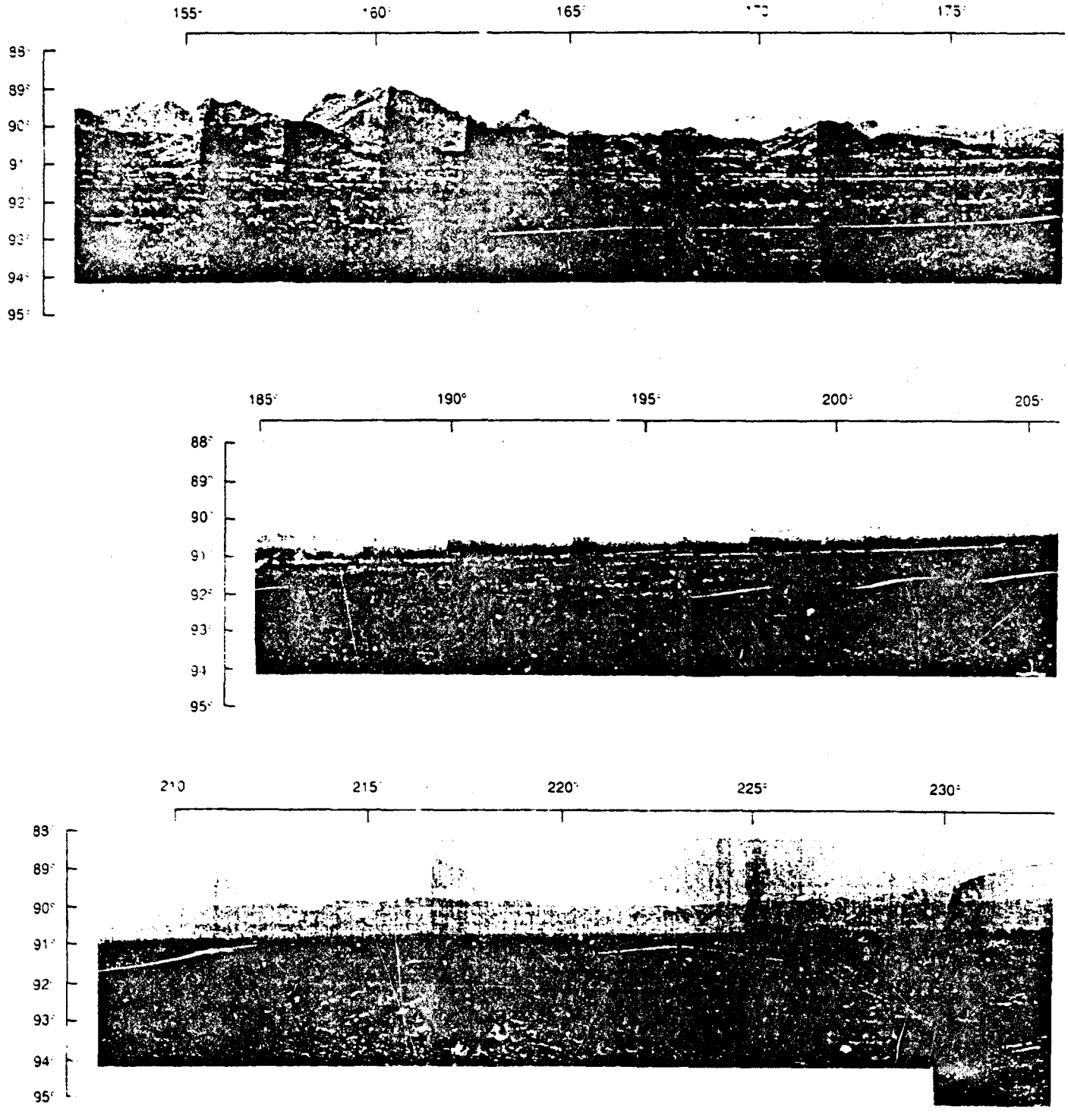
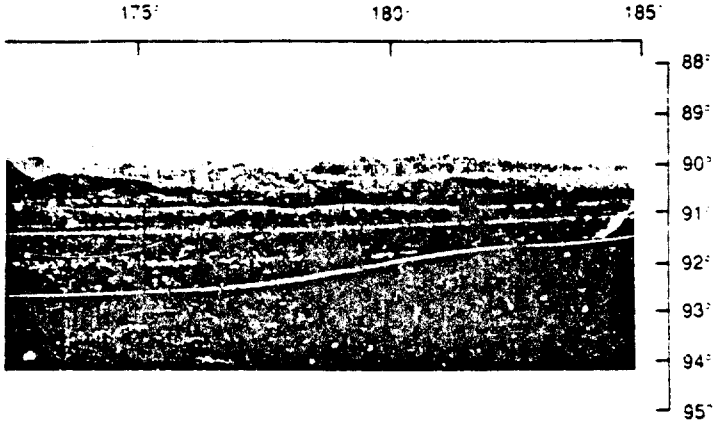


Figure E3. Mosaic photography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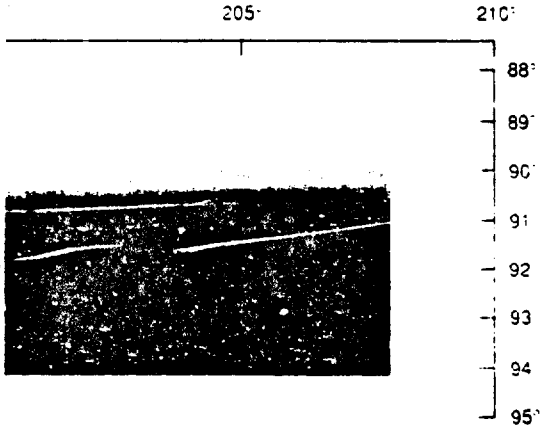
180°
185°
88°
89°
90°
91°
92°
93°
94°
95°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90°
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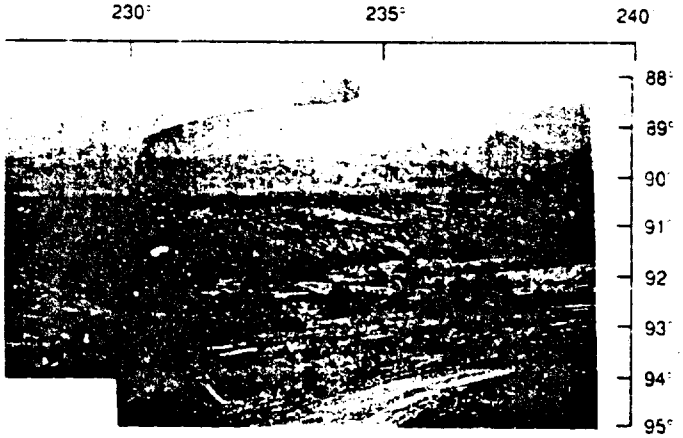
92
93
94
95°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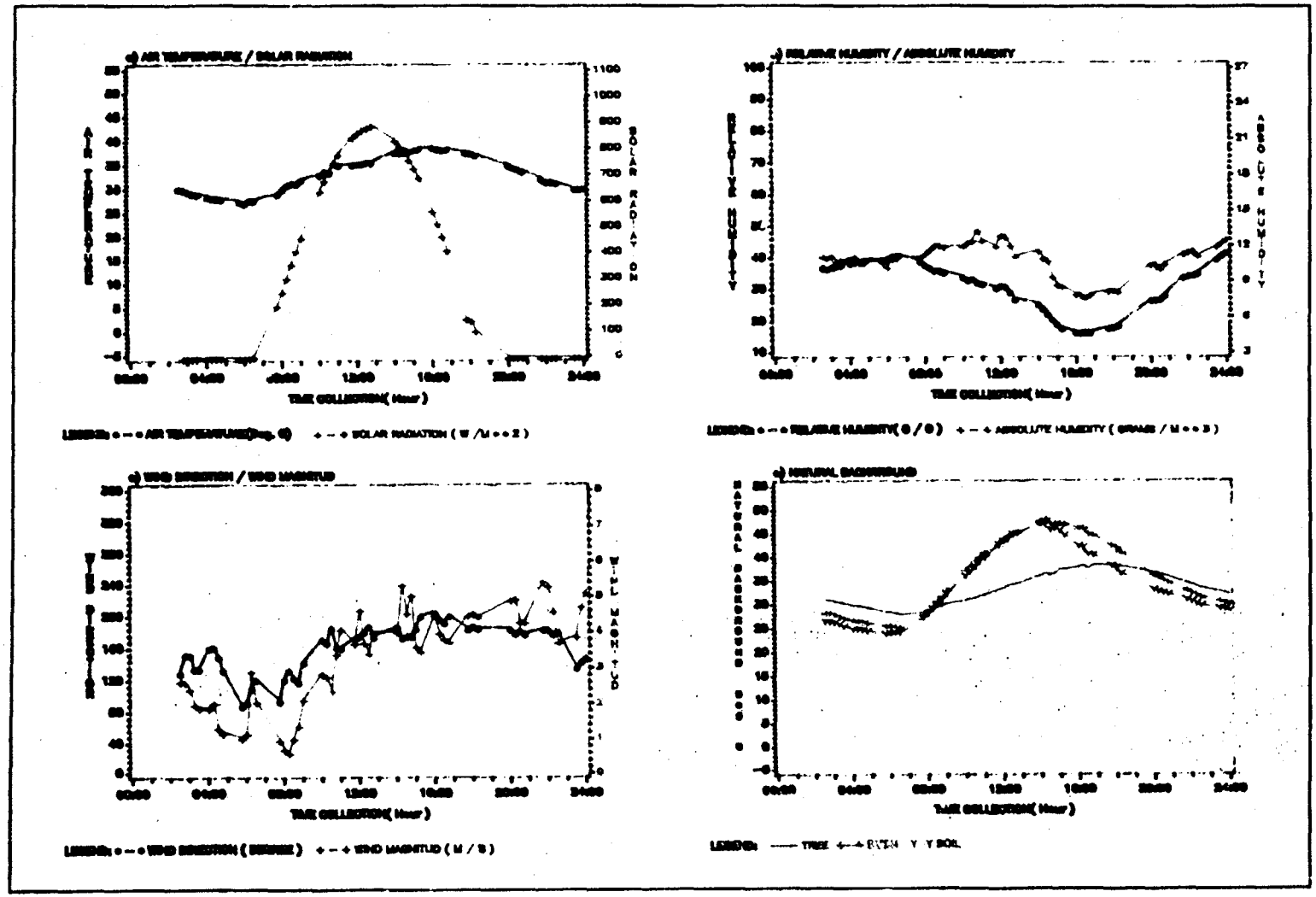

Figure E4. Diurnal meterological summary, 13 September 1991

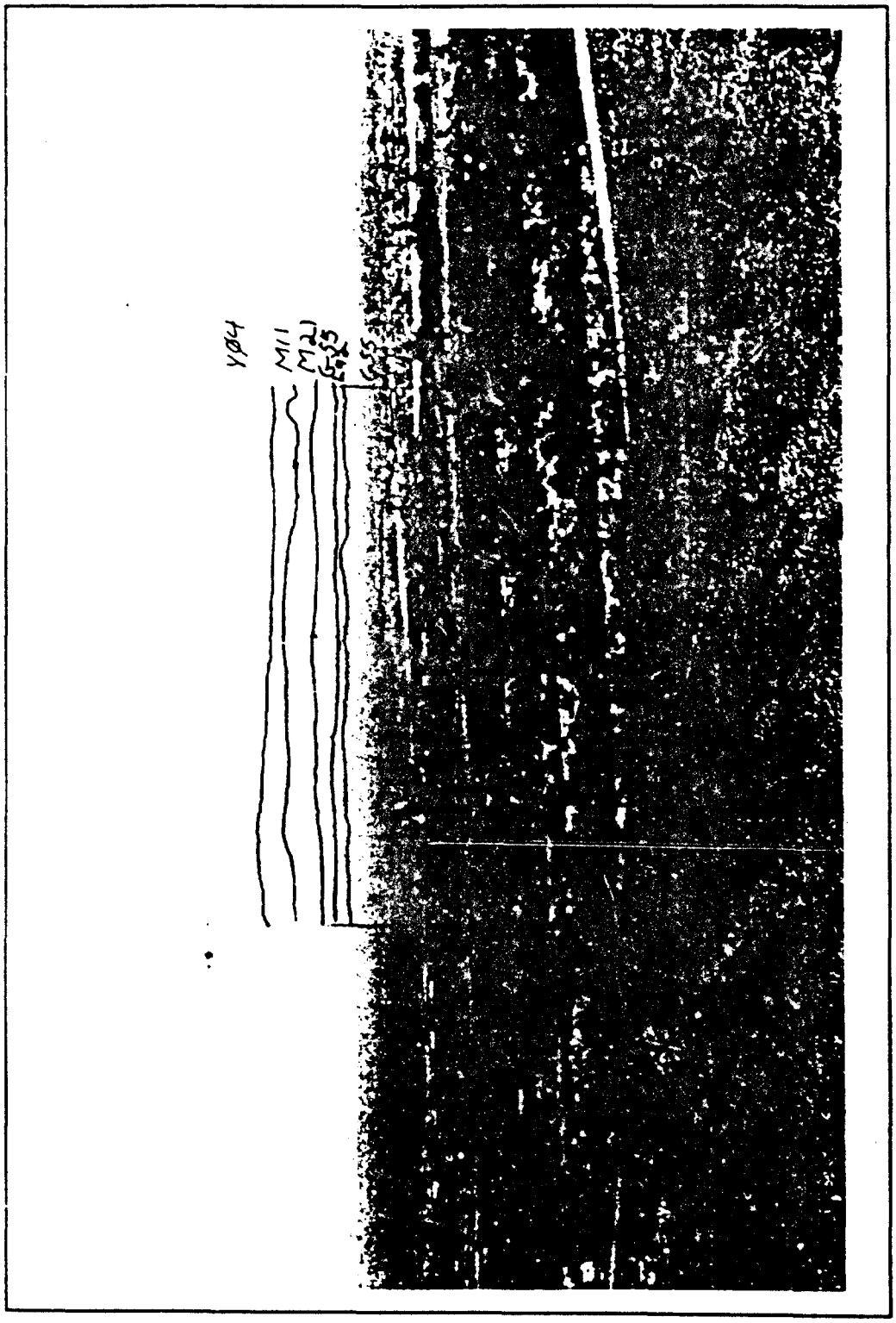

Figure E5. Photointerpretation of scene #13

Table E1
Topographic Survey and Sampling Locations at YPG

TYPE OF MEASUREMENT	VIEW	AZIMUTH ANGLE	ELEVATION ANGLE	SURVEYED RANGE (M)	PASSIVE RANGE (M)	UTM EASTING	UTM NORTHING	ELEVATION (M)
camera pointing angle	1	157.000	91.333	.	1500	.	.	.
camera pointing angle	2	159.500	91.333	.	1500	.	.	.
camera pointing angle	3	162.000	91.333	.	1600	.	.	.
camera pointing angle	4	164.500	91.333	.	1600	.	.	.
camera pointing angle	5	167.000	91.333	.	1700	.	.	.
camera pointing angle	6	169.500	91.333	.	1700	.	.	.
camera pointing angle	7	172.000	91.333	.	1900	.	.	.
camera pointing angle	8	190.000	91.333	.	2600	.	.	.
camera pointing angle	9	192.500	91.333	.	2600	.	.	.
camera pointing angle	10	195.000	91.333	.	2700	.	.	.
camera pointing angle	11	197.500	91.333	.	2700	.	.	.
camera pointing angle	12	200.000	91.333	.	2700	.	.	.
camera pointing angle	13	202.833	91.333	.	2700	.	.	.
camera pointing angle	14	235.333	92.333	.	1500	.	.	.
surveyed point	.	92.022	97.189	13.64	.	47170.52	68233.02	291.393
surveyed point	.	160.722	91.206	1823.42	.	47758.87	66512.71	254.711
surveyed point	.	165.070	91.145	1923.08	.	47652.37	66375.72	254.663
surveyed point	.	165.860	91.151	1955.89	.	47634.70	66337.25	253.818
surveyed point	.	168.053	91.370	1717.85	.	47512.51	66553.34	252.038
surveyed point	.	170.017	90.770	2288.87	.	47553.76	65979.49	262.341
surveyed point	.	170.218	92.013	1257.47	.	47370.52	66995.08	248.941
surveyed point	.	170.240	91.362	1741.06	.	47452.07	66518.13	251.701
surveyed point	.	170.795	91.368	1742.40	.	47435.65	66514.03	251.509
surveyed point	.	171.246	91.364	1742.53	.	47422.12	66511.75	251.624
surveyed point	.	175.481	90.738	3456.75	.	47429.34	64787.79	248.590
surveyed point	.	177.797	90.687	3954.06	.	47309.01	64282.65	245.710
surveyed point	.	183.252	91.132	2494.51	.	47015.50	65743.50	243.821
surveyed point	.	183.291	91.126	2501.09	.	47013.47	65737.02	243.934
surveyed point	.	183.394	91.128	2513.83	.	47008.20	65724.57	243.598
surveyed point	.	187.390	91.041	2085.64	.	46888.78	66165.53	255.195
surveyed point	.	187.760	91.338	2111.69	.	46871.94	66141.72	243.789
surveyed point	.	188.049	91.338	2114.32	.	46861.04	66140.58	243.738
surveyed point	.	198.678	91.111	3046.51	.	46181.53	65347.99	234.024
surveyed point	.	198.879	91.109	3057.78	.	46167.76	65340.77	233.909
surveyed point	.	199.146	91.109	3066.88	.	46151.33	65336.80	233.763
surveyed point	.	199.425	91.108	3085.82	.	46130.93	65323.88	233.426
surveyed point	.	204.038	91.047	3683.30	.	45656.88	64870.19	225.800
soil sample #1	.	.	.	.	.	46487.51	67794.59	248.860
soil sample #2	.	.	.	.	.	44491.10	65524.18	243.830
soil sample #3	.	.	.	.	.	46143.34	71304.35	245.700
camera position	.	.	.	.	.	47157.00	68233.50	293.100

Table E2
Vegetation and Soil Moisture Data

Vegetation	
	September
Trees: deciduous coniferous	2.0 to 2.5 m none
Grass: tall short	none 0.1 m
Scrub/Bushes	0.5 to 1.5 m
Soil Moisture	
	September
Location	1 2 3
% Moisture	2.2% 1.0% 1.0%

Table E3
Meterological and Radiometric Data

DAY AND TIME OF COLLECTION	VISITED SITE	AIR TEMP. (C)	SOLAR RADIATION (W/M**2)	WIND MAGNITUD (M/S)	WIND DIRECTION (DEGREES)	RELATIVE HUMIDITY (PERCENT)	BCKGND GRASS (C)	BCKGND BUSH (C)	BCKGND TREE (C)	BCKGND SOIL (C)	BCKGND ROAD (C)
12SEP90:00:15	YPG	31.51	0.12	2.87	103.20	41.03	.	31.22	34.50	29.19	.
12SEP90:00:30	YPG	31.21	0.25	3.34	116.40	41.46	.	30.91	34.16	28.95	.
12SEP90:00:45	YPG	31.05	0.29	3.03	117.10	40.06	.	30.50	33.92	28.73	.
12SEP90:01:00	YPG	31.25	0.12	2.96	131.30	37.39	.	30.08	33.61	28.25	.
12SEP90:01:15	YPG	31.03	0.07	2.18	132.80	36.46	.	29.63	33.28	27.57	.
12SEP90:01:30	YPG	31.05	0.25	1.96	135.80	35.71	.	29.14	32.89	27.19	.
12SEP90:01:45	YPG	31.12	.	2.05	97.50	34.78	.	28.68	32.53	26.57	.
12SEP90:02:00	YPG	30.89	.	1.81	93.50	34.80	.	28.34	32.24	26.20	.
12SEP90:02:15	YPG	30.70	.	2.40	112.50	34.91	.	28.11	31.98	25.90	.
12SEP90:02:30	YPG	30.23	0.10	1.95	94.30	35.45	.	27.95	31.80	25.89	.
12SEP90:02:45	YPG	30.65	0.12	1.48	94.40	34.40	.	27.43	31.29	25.51	.
12SEP90:03:00	YPG	30.66	0.10	1.74	94.20	34.11	.	27.34	31.12	25.18	.
12SEP90:03:15	YPG	29.91	0.10	0.97	78.60	35.29	.	27.16	30.98	25.31	.
12SEP90:03:30	YPG	29.81	0.34	0.74	97.50	35.14	.	26.73	30.46	24.92	.
12SEP90:03:45	YPG	29.93	0.29	1.44	82.00	34.68	.	26.64	30.25	24.64	.
12SEP90:04:00	YPG	28.98	0.44	2.67	104.60	36.58	.	26.74	30.25	24.85	.
12SEP90:04:15	YPG	29.26	0.37	2.71	136.40	36.30	.	26.44	30.00	24.66	.
12SEP90:04:30	YPG	29.17	0.34	2.87	170.60	36.80	.	26.06	29.75	24.49	.
12SEP90:04:45	YPG	28.58	0.49	0.77	109.00	37.21	.	25.89	29.54	24.26	.
12SEP90:05:00	YPG	28.69	0.52	0.59	98.00	36.66	.	25.57	29.14	23.64	.
12SEP90:05:15	YPG	28.55	0.32	0.44	88.50	36.52	.	25.18	28.77	23.35	.
12SEP90:05:30	YPG	28.73	0.47	0.79	11.99	36.41	.	24.96	28.57	23.14	.
12SEP90:05:45	YPG	28.04	0.47	1.33	347.50	37.41	.	24.97	28.52	23.05	.
12SEP90:06:00	YPG	28.28	0.59	0.95	5.05	37.30	.	24.95	28.46	23.09	.
12SEP90:06:15	YPG	28.34	1.72	1.01	36.55	37.32	.	24.84	28.21	23.19	.
12SEP90:06:30	YPG	27.94	7.60	1.87	8.99	38.86	.	24.69	27.94	23.06	.
12SEP90:06:45	YPG	28.06	26.07	1.39	20.11	39.02	.	25.14	28.21	23.50	.
12SEP90:07:00	YPG	28.10	62.87	1.24	9.40	39.64	.	25.50	28.33	24.25	.
12SEP90:07:15	YPG	27.79	112.10	1.90	357.60	41.40	.	25.76	28.16	24.91	.
12SEP90:07:30	YPG	28.93	161.90	0.70	52.06	40.57	.	26.63	28.45	25.88	.
12SEP90:07:45	YPG	29.01	211.80	1.35	88.10	39.00	.	27.57	28.54	27.16	.
12SEP90:08:00	YPG	29.95	263.10	0.76	88.70	37.91	.	28.53	28.42	28.16	.
12SEP90:08:15	YPG	31.25	318.00	0.60	77.20	36.67	.	29.69	28.78	29.23	.
12SEP90:08:30	YPG	31.34	371.60	1.55	91.90	36.10	.	30.64	29.56	30.37	.
12SEP90:08:45	YPG	31.60	423.70	1.63	120.00	35.36	.	31.57	30.23	31.07	.
12SEP90:09:00	YPG	31.54	474.80	1.77	119.20	36.05	.	32.66	30.18	31.92	.
12SEP90:09:15	YPG	32.41	522.50	3.10	161.00	37.43	.	33.95	30.21	32.93	.
12SEP90:09:30	YPG	32.55	570.00	3.43	166.60	38.40	.	35.49	30.49	34.21	.
12SEP90:09:45	YPG	32.67	612.70	3.45	182.50	38.60	.	36.56	30.55	34.97	.
12SEP90:10:00	YPG	32.94	657.50	3.71	179.00	38.14	.	36.80	30.73	35.75	.
12SEP90:10:15	YPG	33.26	693.80	4.66	180.40	37.31	.	37.64	31.14	36.75	.
12SEP90:10:30	YPG	33.91	734.00	4.30	180.50	36.30	.	38.25	31.44	37.44	.
12SEP90:10:45	YPG	34.56	770.00	4.06	176.10	35.37	.	39.45	32.09	38.74	.
12SEP90:11:00	YPG	34.34	798.00	4.89	183.90	35.25	.	40.08	32.29	39.47	.
12SEP90:11:15	YPG	34.61	825.00	4.73	176.50	35.20	.	41.31	33.05	40.83	.
12SEP90:11:30	YPG	35.21	849.00	4.72	179.00	34.09	.	42.36	33.59	42.01	.
12SEP90:11:45	YPG	35.82	866.00	3.46	200.10	33.49	.	43.19	33.75	42.86	.
12SEP90:12:00	YPG	35.60	877.00	4.05	164.40	34.72	.	44.41	34.38	44.12	.
12SEP90:12:15	YPG	36.68	888.00	4.99	157.70	33.38	.	44.36	34.45	44.35	.
12SEP90:12:30	YPG	36.93	903.00	5.49	181.60	31.94	.	44.89	34.85	44.70	.
12SEP90:12:45	YPG	36.95	904.00	4.94	179.30	30.73	.	45.47	35.17	45.58	.

(Continued)

Table E3 (Continued)

DAY AND TIME OF COLLECTION	VISITED SITE	AIR TEMP. (C)	SOLAR RADIATION (W/M**2)	WIND MAGNITUD (M/S)	WIND DIRECTION (DEGREES)	RELATIVE HUMIDITY (PERCENT)	BCKGND GRASS (C)	BCKGND BUSH (C)	BCKGND TREE (C)	BCKGND SOIL (C)	BCKGND ROAD (C)
12SEP90:13:00	YPG	37.74	909.00	2.77	195.60	27.82	.	46.24	35.75	46.31	.
12SEP90:13:15	YPG	38.28	905.00	3.37	192.20	24.47	.	46.65	35.76	46.56	.
12SEP90:13:30	YPG	38.28	897.00	4.16	181.20	21.92	.	47.28	36.50	46.98	.
12SEP90:13:45	YPG	38.59	880.00	3.41	192.40	22.37	.	47.53	36.78	47.24	.
12SEP90:14:00	YPG	38.82	860.00	3.17	210.90	19.62	.	47.77	36.93	47.10	.
12SEP90:14:15	YPG	38.91	834.00	3.41	178.40	19.41	.	48.42	37.68	47.80	.
12SEP90:14:30	YPG	39.50	816.00	3.27	196.70	16.83	.	48.08	37.37	46.96	.
12SEP90:14:45	YPG	39.94	787.00	2.62	202.80	15.29	.	49.03	38.23	47.56	.
12SEP90:15:00	YPG	39.88	750.00	3.36	187.50	15.36	.	48.55	38.32	46.77	.
12SEP90:15:15	YPG	40.38	708.00	3.33	218.90	14.53	.	47.83	37.92	45.03	.
12SEP90:15:30	YPG	40.07	675.70	2.08	246.30	14.87	.	48.25	39.14	45.05	.
12SEP90:15:45	YPG	40.66	632.50	3.36	281.90	10.84	.	47.39	38.38	43.64	.
12SEP90:16:00	YPG	40.34	580.10	2.49	259.20	12.67	.	47.69	39.59	43.81	.
12SEP90:16:15	YPG	40.99	532.50	2.53	261.30	11.31	.	46.73	39.03	42.62	.
12SEP90:16:30	YPG	40.37	481.40	3.17	181.30	11.51	.	47.81	39.87	43.10	.
12SEP90:16:45	YPG	40.50	431.20	2.48	163.80	11.40	.	46.92	40.11	42.12	.
12SEP90:17:00	YPG	40.73	387.70	2.99	180.70	10.72	.	46.00	39.26	41.00	.
12SEP90:17:15	YPG	41.71	335.90	2.87	241.00	7.94	.	44.97	39.20	40.21	.
12SEP90:17:30	YPG	41.37	221.00	2.58	235.50	7.82	.	44.69	39.75	39.93	.
12SEP90:17:45	YPG	41.03	165.60	2.94	279.30	7.87	.	44.16	39.64	39.19	.
12SEP90:18:00	YPG	41.26	162.20	1.34	226.00	7.74	.	43.23	38.97	38.27	.
12SEP90:18:15	YPG	40.69	116.00	2.34	207.30	8.03	.	42.25	39.67	37.62	.
12SEP90:18:30	YPG	39.22	62.93	4.80	176.70	10.45	.	41.48	39.86	36.82	.
12SEP90:18:45	YPG	38.66	19.39	5.70	172.70	11.30	.	40.36	39.26	35.80	.
12SEP90:19:00	YPG	38.18	3.51	6.00	172.60	12.56	.	39.60	39.11	35.41	.
12SEP90:19:15	YPG	37.80	0.79	6.19	172.00	14.27	.	38.98	39.05	35.26	.
12SEP90:19:30	YPG	38.11	1.10	7.06	171.60	20.47	.	38.49	38.88	35.09	.
12SEP90:19:45	YPG	36.50	0.39	7.47	170.90	23.67	.	38.00	38.66	34.91	.
12SEP90:20:00	YPG	36.49	2.23	6.62	173.40	25.03	.	37.46	38.39	34.60	.
12SEP90:20:15	YPG	35.68	0.42	6.26	178.30	26.31	.	36.87	38.05	34.14	.
12SEP90:20:30	YPG	35.64	0.86	6.43	183.60	27.59	.	36.28	37.71	33.78	.
12SEP90:20:45	YPG	35.37	0.59	5.40	183.00	29.08	.	35.84	37.37	33.46	.
12SEP90:21:00	YPG	35.05	0.93	4.73	186.60	30.99	.	35.28	36.99	32.97	.
12SEP90:21:15	YPG	34.59	0.34	3.62	186.00	32.95	.	34.80	36.69	32.75	.
12SEP90:21:30	YPG	34.20	0.61	4.62	168.00	34.52	.	34.41	36.34	32.33	.
12SEP90:21:45	YPG	33.63	0.71	5.11	173.10	36.28	.	33.96	36.00	31.92	.
12SEP90:22:00	YPG	33.07	0.25	5.04	174.60	37.67	.	33.67	35.73	31.64	.
12SEP90:22:15	YPG	33.01	0.29	4.79	163.00	38.25	.	33.23	35.43	31.07	.
12SEP90:22:30	YPG	32.75	0.29	3.81	170.10	38.53	.	32.81	35.18	30.89	.
12SEP90:22:45	YPG	32.53	0.29	5.17	175.00	38.47	.	32.44	34.88	30.73	.
12SEP90:23:00	YPG	32.17	0.29	4.17	169.20	38.72	.	32.13	34.55	30.52	.
12SEP90:23:15	YPG	31.93	0.44	3.31	173.30	38.92	.	31.70	34.21	29.96	.
12SEP90:23:30	YPG	31.68	0.29	2.50	173.40	39.25	.	31.38	33.93	29.43	.
12SEP90:23:45	YPG	31.41	0.42	2.17	172.40	39.82	.	31.12	33.70	28.98	.
13SEP90:00:00	YPG	31.15	0.42	1.98	113.90	40.39	.	30.81	33.52	28.79	.
13SEP90:00:15	YPG	31.35	0.20	2.54	130.30	40.07	.	30.59	33.35	28.76	.
13SEP90:00:30	YPG	31.07	0.27	2.34	123.10	40.01	.	30.31	33.12	28.55	.
13SEP90:00:45	YPG	30.88	0.15	2.14	128.80	39.53	.	29.91	32.86	28.10	.
13SEP90:01:00	YPG	30.82	0.17	1.93	119.90	39.09	.	29.64	32.69	27.85	.
13SEP90:01:15	YPG	30.79	0.05	0.73	81.90	39.13	.	29.33	32.39	27.58	.
13SEP90:01:30	YPG	30.29	0.42	2.78	99.30	40.38	.	29.11	32.14	27.38	.

(Continued)

Table E3 (Continued)

DAY AND TIME OF COLLECTION	VISITED SITE	AIR TEMP. (C)	SOLAR RADIATION (W/M**2)	WIND MAGNITUD (M/S)	WIND DIRECTION (DEGREES)	RELATIVE HUMIDITY (PERCENT)	BCKGND GRASS (C)	BCKGND BUSH (C)	BCKGND TREE (C)	BCKGND SOIL (C)	BCKGND ROAD (C)
13SEP90:01:45	YPG	30.42	0.20	3.02	109.20	38.96	.	28.88	31.90	27.17	.
13SEP90:02:00	YPG	30.15	0.00	3.13	112.40	39.08	.	28.60	31.70	26.91	.
13SEP90:02:15	YPG	30.18	.	2.56	118.10	38.19	.	28.39	31.52	26.78	.
13SEP90:02:30	YPG	30.42	.	2.69	130.60	37.29	.	28.16	31.33	26.49	.
13SEP90:02:45	YPG	30.26	0.05	2.66	153.70	36.79	.	28.00	31.12	26.29	.
13SEP90:03:00	YPG	29.83	0.00	2.47	153.40	37.42	.	27.80	30.98	26.27	.
13SEP90:03:15	YPG	29.41	0.05	2.04	135.60	38.03	.	27.35	30.73	25.92	.
13SEP90:03:30	YPG	29.25	0.15	1.94	135.60	38.27	.	27.05	30.51	25.48	.
13SEP90:03:45	YPG	29.30	0.42	1.32	176.60	38.14	.	26.68	30.20	25.16	.
13SEP90:04:00	YPG	28.83	0.44	1.93	161.80	38.75	.	26.53	30.05	24.82	.
13SEP90:04:15	YPG	28.51	0.59	2.09	163.00	39.18	.	26.47	29.94	24.69	.
13SEP90:04:30	YPG	28.39	0.66	1.38	150.80	39.42	.	26.25	29.76	24.65	.
13SEP90:04:45	YPG	28.22	0.74	1.23	133.90	39.65	.	26.05	29.57	24.40	.
13SEP90:05:00	YPG	28.28	0.81	1.24	88.20	39.68	.	25.83	29.38	24.23	.
13SEP90:05:15	YPG	28.36	0.88	0.33	107.20	39.36	.	25.56	29.02	24.01	.
13SEP90:05:30	YPG	28.21	0.88	0.57	121.30	39.22	.	25.26	28.69	23.92	.
13SEP90:05:45	YPG	27.79	0.83	1.09	89.20	39.72	.	25.28	28.62	23.77	.
13SEP90:06:00	YPG	27.40	0.93	1.22	93.40	40.32	.	25.43	28.59	23.86	.
13SEP90:06:15	YPG	28.04	1.89	2.97	110.90	40.91	.	25.27	28.43	24.16	.
13SEP90:06:30	YPG	28.00	7.19	2.12	121.90	41.28	.	24.97	28.18	24.03	.
13SEP90:06:45	YPG	28.09	24.15	1.57	133.50	41.15	.	25.09	28.14	24.05	.
13SEP90:07:00	YPG	28.38	58.13	1.58	110.90	40.66	.	25.56	28.42	24.53	.
13SEP90:07:15	YPG	28.73	105.70	1.13	98.00	40.06	.	26.10	28.60	25.28	.
13SEP90:07:30	YPG	28.85	153.20	1.49	102.00	39.83	.	26.76	28.73	26.12	.
13SEP90:07:45	YPG	29.40	203.70	1.04	95.10	39.15	.	27.54	28.59	27.21	.
13SEP90:08:00	YPG	30.35	256.60	0.78	122.20	38.01	.	28.55	28.67	28.30	.
13SEP90:08:15	YPG	31.20	310.00	0.65	133.90	37.10	.	29.51	28.98	29.19	.
13SEP90:08:30	YPG	31.59	363.70	1.08	124.10	36.28	.	30.48	29.69	29.98	.
13SEP90:08:45	YPG	31.51	414.90	1.44	118.90	36.20	.	31.59	29.94	30.98	.
13SEP90:09:00	YPG	32.23	464.90	2.17	143.50	35.61	.	32.91	30.39	32.29	.
13SEP90:09:15	YPG	32.72	513.40	2.62	140.30	35.19	.	33.92	30.45	33.08	.
13SEP90:09:30	YPG	33.00	560.40	2.47	146.50	34.53	.	35.24	30.50	34.04	.
13SEP90:09:45	YPG	33.11	604.60	2.44	157.20	34.58	.	36.72	30.84	34.94	.
13SEP90:10:00	YPG	33.35	646.10	2.91	172.90	34.05	.	37.30	31.15	36.02	.
13SEP90:10:15	YPG	34.11	685.50	2.83	168.70	33.20	.	38.09	31.44	36.99	.
13SEP90:10:30	YPG	33.73	722.00	2.41	186.70	33.56	.	39.05	31.60	37.92	.
13SEP90:10:45	YPG	35.63	754.00	3.46	163.20	32.35	.	39.92	32.06	39.35	.
13SEP90:11:00	YPG	35.29	785.00	4.15	161.60	31.84	.	40.88	32.25	39.79	.
13SEP90:11:15	YPG	35.26	810.00	4.06	147.60	31.51	.	42.00	32.88	41.15	.
13SEP90:11:30	YPG	35.07	835.00	4.71	161.40	30.52	.	42.61	33.17	42.09	.
13SEP90:11:45	YPG	35.35	849.00	3.74	173.70	30.69	.	42.50	33.44	42.83	.
13SEP90:12:00	YPG	35.54	865.00	4.68	176.60	31.39	.	43.55	33.70	43.51	.
13SEP90:12:15	YPG	35.54	877.00	3.77	181.90	31.04	.	44.32	34.28	43.98	.
13SEP90:12:30	YPG	35.85	884.00	3.47	188.50	29.32	.	44.84	34.45	45.05	.
13SEP90:12:45	YPG	35.79	892.00	4.04	175.30	27.05	.	45.28	34.63	45.11	.
13SEP90:13:00	YPG	36.63	886.00	2.56	174.20	26.85	.	46.03	35.27	45.93	.
13SEP90:13:15	YPG	36.77	880.00	3.80	181.50	26.61	.	47.01	35.96	46.75	.
13SEP90:13:30	YPG	37.15	866.00	3.22	188.90	27.49	.	47.45	35.92	46.79	.
13SEP90:13:45	YPG	37.39	854.00	3.21	181.30	26.62	.	47.11	36.19	46.62	.
13SEP90:14:00	YPG	38.00	837.00	4.07	188.30	25.39	.	47.56	36.33	46.97	.
13SEP90:14:15	YPG	37.80	814.00	5.39	174.10	24.05	.	47.96	36.80	46.86	.

(Continued)

Table E3 (Concluded)

DAY AND TIME OF COLLECTION	VISITED SITE	AIR TEMP. (C)	SOLAR RADIATION (W/M**2)	WIND MAGNITUD (M/S)	WIND DIRECTION (DEGREES)	RELATIVE HUMIDITY (PERCENT)	BCKGND GRASS (C)	BCKGND BUSH (C)	BCKGND TREE (C)	BCKGND SOIL (C)	BCKGND ROAD (C)
13SEP90:14:30	YPG	38.51	791.00	4.59	176.80	22.42	.	46.77	36.36	45.67	.
13SEP90:14:45	YPG	38.15	763.00	5.09	176.00	20.68	.	47.02	36.86	46.15	.
13SEP90:15:00	YPG	38.44	731.00	3.66	185.90	19.22	.	47.08	37.76	45.70	.
13SEP90:15:15	YPG	38.67	695.50	3.51	201.30	17.92	.	46.89	37.73	44.66	.
13SEP90:15:30	YPG	38.69	654.90	4.69	190.00	17.46	.	46.93	37.69	43.72	.
13SEP90:15:45	YPG	38.62	614.70	3.63	215.70	16.69	.	46.26	37.97	42.96	.
13SEP90:16:00	YPG	38.91	567.30	4.53	206.20	16.58	.	45.98	38.21	42.43	.
13SEP90:16:15	YPG	38.67	521.00	4.03	198.00	16.46	.	46.06	38.53	42.14	.
13SEP90:16:30	YPG	38.49	470.40	3.86	193.10	16.70	.	44.86	37.74	40.55	.
13SEP90:16:45	YPG	38.63	416.30	3.79	201.60	16.48	.	44.45	38.53	40.40	.
13SEP90:17:00	YPG	38.50	364.10	3.66	205.70	16.21	.	44.24	38.74	40.27	.
13SEP90:17:15	YPG	38.30	310.70	4.54	186.10	17.23	.	43.25	38.39	39.06	.
13SEP90:17:30	YPG	37.91	226.90	4.08	194.20	17.52	.	43.15	38.71	38.99	.
13SEP90:17:45	YPG	37.85	151.40	4.53	184.70	18.07	.	42.36	38.47	38.17	.
13SEP90:18:00	YPG	37.68	145.60	4.58	188.20	18.25	.	41.82	38.50	37.45	.
13SEP90:18:15	YPG	37.31	105.00	4.48	185.30	18.84	.	40.72	38.18	36.46	.
13SEP90:18:30	YPG	37.07	50.58	4.28	183.00	19.16	.	39.92	37.99	35.74	.
13SEP90:18:45	YPG	36.85	16.59	4.17	187.30	18.95	.	38.95	37.72	34.83	.
13SEP90:19:00	YPG	36.55	3.70	3.91	175.20	19.57	.	38.16	37.64	34.24	.
13SEP90:19:15	YPG	36.26	3.19	3.91	166.80	18.97	.	37.52	37.58	33.72	.
13SEP90:19:30	YPG	35.75	1.15	4.43	177.10	21.03	.	37.02	37.46	33.47	.
13SEP90:19:45	YPG	35.69	1.20	5.26	183.50	25.53	.	36.47	37.25	33.45	.
13SEP90:20:00	YPG	35.15	1.91	4.94	184.20	26.78	.	35.86	36.94	33.03	.
13SEP90:20:15	YPG	34.69	0.96	4.98	178.90	26.86	.	35.33	36.63	32.64	.
13SEP90:20:30	YPG	34.37	0.96	4.33	182.40	27.14	.	34.86	36.35	32.35	.
13SEP90:20:45	YPG	33.93	1.18	4.32	178.10	28.33	.	34.33	36.02	32.03	.
13SEP90:21:00	YPG	33.48	0.98	4.70	187.20	30.61	.	33.89	35.68	31.70	.
13SEP90:21:15	YPG	33.17	1.10	4.71	187.50	31.71	.	33.42	35.33	31.38	.
13SEP90:21:30	YPG	32.58	1.05	5.23	188.10	33.02	.	33.08	35.02	31.08	.
13SEP90:21:45	YPG	32.36	1.13	5.49	184.00	33.95	.	32.69	34.71	30.89	.
13SEP90:22:00	YPG	31.72	0.98	5.34	183.60	34.43	.	32.10	34.35	30.48	.
13SEP90:22:15	YPG	31.77	1.03	4.62	178.20	34.66	.	31.77	34.00	30.10	.
13SEP90:22:30	YPG	31.47	0.86	3.74	180.50	35.32	.	31.30	33.65	29.68	.
13SEP90:22:45	YPG	31.09	0.88	1.60	158.20	36.07	.	30.94	33.34	29.16	.
13SEP90:23:00	YPG	30.75	1.20	1.55	119.30	36.77	.	30.59	33.11	28.78	.
13SEP90:23:15	YPG	30.50	1.25	2.58	145.90	37.50	.	30.51	32.94	28.99	.
13SEP90:23:30	YPG	30.22	1.05	3.91	135.70	39.82	.	30.33	32.75	28.96	.
13SEP90:23:45	YPG	30.19	0.96	4.76	143.20	41.02	.	30.13	32.50	28.84	.

Table E4
Scene Contents Reports for Yuma Proving Ground; Angular Scale of Photos Interpreted Equals 0.69 deg/in.

Scene #1 TOTAL AREA: 11.8769 SQ IN.

RECORD NUMBER	AREA OR OBJECT	CHARACTERISTIC	COLOR	POLYGON AREA (SQ IN.)	PERCENTAGE OF AREA	POLYGON PERIMETER (INCHES)
2	Mountain	Barren	Brown	1.9574	16.48	8.1860
3	Mountain	Foothill	Brown	2.5478	21.45	9.1322
4	Soil	Rocky Terrain	Tan	0.9507	8.00	8.5143
5	Grass	Wash Area	Green	6.4209	54.06	11.6542

NUMBER OF POLYGONS: 4

DIFFERENT TYPES OF OBJECTS: 3

PERCENTAGE OF AREA FOR TYPE Man-Made IS 0.00%
PERCENTAGE OF AREA FOR TYPE Grass IS 54.06%
PERCENTAGE OF AREA FOR TYPE Trees IS 0.00%
PERCENTAGE OF AREA FOR TYPE Road IS 0.00%
PERCENTAGE OF AREA FOR TYPE Water IS 0.00%
PERCENTAGE OF AREA FOR TYPE Sky IS 0.00%
PERCENTAGE OF AREA FOR TYPE Soil IS 8.00%
PERCENTAGE OF AREA FOR TYPE Mountain IS 37.93%

TOTAL EDGE LENGTH: 11.8432 IN.

LINEAR EDGES BETWEEN TYPES (INCHES)

	Man-Made	Grass	Trees	Road	Water	Sky	Soil	Mountain
Man-Made	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Grass	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	4.4226	0.0000
Trees	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Sky	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Soil	0.0000	4.4226	0.0000	0.0000	0.0000	0.0000	0.0000	3.6905
Mountain	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	3.6905	3.7301

NUMBER OF VEHICLES: 0

GREEN VEGETATION PRESENT: YES

(Continued)

Table E4 (Continued)

Scene #2 TOTAL AREA: 11.9663 SQ IN.

RECORD NUMBER	AREA OR OBJECT	CHARACTERISTIC	COLOR	POLYGON AREA (SQ IN.)	PERCENTAGE OF AREA	POLYGON PERIMETER (INCHES)
2	Mountain	Barren	Brown	1.2835	10.73	8.0001
3	Mountain	Foothill	Brown	3.7226	31.11	9.3782
4	Soil	Rocky Terrain	Tan	0.7085	5.92	8.8138
5	Grass	Wash Area	Green	6.2480	52.21	11.6522
6	Man-Made	Vehicle	Brown	0.0037	0.03	0.2632

NUMBER OF POLYGONS: 5

DIFFERENT TYPES OF OBJECTS: 4

PERCENTAGE OF AREA FOR TYPE Man-Made IS 0.03%
PERCENTAGE OF AREA FOR TYPE Grass IS 52.21%
PERCENTAGE OF AREA FOR TYPE Trees IS 0.00%
PERCENTAGE OF AREA FOR TYPE Road IS 0.00%
PERCENTAGE OF AREA FOR TYPE Water IS 0.00%
PERCENTAGE OF AREA FOR TYPE Sky IS 0.00%
PERCENTAGE OF AREA FOR TYPE Soil IS 5.92%
PERCENTAGE OF AREA FOR TYPE Mountain IS 41.83%

TOTAL EDGE LENGTH: 12.1280 IN.

LINEAR EDGES BETWEEN TYPES (INCHES)

	Man-Made	Grass	Trees	Road	Water	Sky	Soil	Mountain
Man-Made	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.1689	0.0000
Grass	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	4.5884	0.0000
Trees	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Sky	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Soil	0.1689	4.5884	0.0000	0.0000	0.0000	0.0000	0.0000	3.6477
Mountain	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	3.6477	3.7230

NUMBER OF VEHICLES: 1

GREEN VEGETATION PRESENT: YES

(Continued)

Table E4 (Continued)

Scene #3 TOTAL AREA: 12.1018 SQ IN.

RECORD NUMBER	AREA OR OBJECT	CHARACTERISTIC	COLOR	POLYGON AREA (SQ IN.)	PERCENTAGE OF AREA	POLYGON PERIMETER (INCHES)
2	Mountain	Barren	Brown	0.6999	5.78	6.3871
3	Mountain	Foothill	Brown	3.6340	30.03	9.5585
4	Soil	Rocky Terrain	Tan	1.9935	16.47	9.8118
5	Man-Made	Vehicle	Brown	0.0241	0.20	0.8532
6	Grass	Wash Area	Green	5.7503	47.52	10.8721

NUMBER OF POLYGONS: 5

DIFFERENT TYPES OF OBJECTS: 4

PERCENTAGE OF AREA FOR TYPE Man-Made IS 0.20%
PERCENTAGE OF AREA FOR TYPE Grass IS 47.52%
PERCENTAGE OF AREA FOR TYPE Trees IS 0.00%
PERCENTAGE OF AREA FOR TYPE Road IS 0.00%
PERCENTAGE OF AREA FOR TYPE Water IS 0.00%
PERCENTAGE OF AREA FOR TYPE Sky IS 0.00%
PERCENTAGE OF AREA FOR TYPE Soil IS 16.47%
PERCENTAGE OF AREA FOR TYPE Mountain IS 35.81%

TOTAL EDGE LENGTH: 11.7759 IN.

LINEAR EDGES BETWEEN TYPES (INCHES)

	Man-Made	Grass	Trees	Road	Water	Sky	Soil	Mountain
Man-Made	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.8532	0.0000
Grass	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	4.0372	0.0000
Trees	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Sky	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Soil	0.8532	4.0372	0.0000	0.0000	0.0000	0.0000	0.0000	3.7514
Mountain	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	3.7514	3.1341

NUMBER OF VEHICLES: 1

GREEN VEGETATION PRESENT: YES

(Continued)

Table E4 (Continued)

Scene #4 TOTAL AREA: 12.0347 SQ IN.

RECORD NUMBER	AREA OR OBJECT	CHARACTERISTIC	COLOR	POLYGON AREA (SQ IN.)	PERCENTAGE OF AREA	POLYGON PERIMETER (INCHES)
2	Mountain	Foothill	Brown	3.2295	26.83	9.2578
3	Soil	Rocky Terrain	Tan	2.1814	18.13	10.0586
4	Man-Made	Vehicle	Brown	0.0230	0.19	0.7008
5	Grass	Wash Area	Green	5.4795	45.53	11.4409
6	Road	Gravel	Tan	0.2897	2.41	7.5273
7	Soil	Rocky Terrain	Brown	0.8318	6.91	7.7589

NUMBER OF POLYGONS: 6

DIFFERENT TYPES OF OBJECTS: 5

PERCENTAGE OF AREA FOR TYPE Man-Made IS 0.19%
PERCENTAGE OF AREA FOR TYPE Grass IS 45.53%
PERCENTAGE OF AREA FOR TYPE Trees IS 0.00%
PERCENTAGE OF AREA FOR TYPE Road IS 2.41%
PERCENTAGE OF AREA FOR TYPE Water IS 0.00%
PERCENTAGE OF AREA FOR TYPE Sky IS 0.00%
PERCENTAGE OF AREA FOR TYPE Soil IS 25.04%
PERCENTAGE OF AREA FOR TYPE Mountain IS 26.83%

TOTAL EDGE LENGTH: 16.4269 IN.

LINEAR EDGES BETWEEN TYPES (INCHES)

	Man-Made	Grass	Trees	Road	Water	Sky	Soil	Mountain
Man-Made	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.7008	0.0000
Grass	0.0000	0.0000	0.0000	3.6766	0.0000	0.0000	4.6234	0.0000
Trees	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Road	0.0000	3.6766	0.0000	0.0000	0.0000	0.0000	3.6681	0.0000
Water	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Sky	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Soil	0.7008	4.6234	0.0000	3.6681	0.0000	0.0000	0.0000	3.7581
Mountain	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	3.7581	0.0000

NUMBER OF VEHICLES: 1

GREEN VEGETATION PRESENT: YES

(Continued)

Table E4 (Continued)

Scene #5 TOTAL AREA: 11.9900 SQ IN.

RECORD NUMBER	AREA OR OBJECT	CHARACTERISTIC	COLOR	POLYGON AREA (SQ IN.)	PERCENTAGE OF AREA	POLYGON PERIMETER (INCHES)
2	Sky	None	Gray	0.5576	4.65	7.8478
3	Mountain	Barren	Brown	0.8622	7.19	8.1351
4	Mountain	Foothill	Brown	3.9643	33.06	10.0745
5	Man-Made	Vehicle	Brown	0.0184	0.15	0.6711
6	Soil	Rocky Terrain	Tan	0.0818	0.68	1.7218
7	Grass	Wash Area	Green	0.4638	3.87	7.7520
8	Soil	Rocky Terrain	Tan	1.5904	13.26	9.3809
9	Man-Made	Vehicle	Tan	0.0144	0.12	0.5207
10	Grass	Wash Area	Green	4.4372	37.01	10.0614

NUMBER OF POLYGONS: 9

DIFFERENT TYPES OF OBJECTS: 5

PERCENTAGE OF AREA FOR TYPE Man-Made IS 0.27%
PERCENTAGE OF AREA FOR TYPE Grass IS 40.87%
PERCENTAGE OF AREA FOR TYPE Trees IS 0.00%
PERCENTAGE OF AREA FOR TYPE Road IS 0.00%
PERCENTAGE OF AREA FOR TYPE Water IS 0.00%
PERCENTAGE OF AREA FOR TYPE Sky IS 4.65%
PERCENTAGE OF AREA FOR TYPE Soil IS 13.95%
PERCENTAGE OF AREA FOR TYPE Mountain IS 40.25%

TOTAL EDGE LENGTH: 21.1512 IN.

LINEAR EDGES BETWEEN TYPES (INCHES)

	Man-Made	Grass	Trees	Road	Water	Sky	Soil	Mountain
Man-Made	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.5207	0.6711
Grass	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	8.6601	2.8914
Trees	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Sky	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	3.8983
Soil	0.5207	8.6601	0.0000	0.0000	0.0000	0.0000	0.0000	0.7969
Mountain	0.6711	2.8914	0.0000	0.0000	0.0000	3.8983	0.7969	3.7128

NUMBER OF VEHICLES: 2

GREEN VEGETATION PRESENT: YES

(Continued)

Table E4 (Continued)

Scene #6 TOTAL AREA: 11.9592 SQ IN.

RECORD NUMBER	AREA OR OBJECT	CHARACTERISTIC	COLOR	POLYGON AREA (SQ IN.)	PERCENTAGE OF AREA	POLYGON PERIMETER (INCHES)
2	Mountain	Barren	Brown	1.4053	11.75	8.1513
3	Sky	None	Gray	0.0421	0.35	1.0461
4	Sky	None	Gray	0.0252	0.21	0.9192
5	Mountain	Foothill	Brown	3.4688	29.01	11.4833
6	Man-Made	Vehicle	Tan	0.0199	0.17	0.6177
7	Man-Made	Vehicle	Tan	0.0161	0.13	0.6292
8	Grass	Wash Area	Green	0.7140	5.97	8.1048
9	Soil	Rocky Terrain	Tan	1.5239	12.74	9.4339
10	Man-Made	Vehicle	Tan	0.0190	0.16	0.6150
11	Grass	Wash Area	Green	4.6693	39.04	11.6810
12	Man-Made	Vehicle	Tan	0.0556	0.46	1.0283

NUMBER OF POLYGONS: 11

DIFFERENT TYPES OF OBJECTS: 5

PERCENTAGE OF AREA FOR TYPE Man-Made IS 0.92%
PERCENTAGE OF AREA FOR TYPE Grass IS 45.01%
PERCENTAGE OF AREA FOR TYPE Trees IS 0.00%
PERCENTAGE OF AREA FOR TYPE Road IS 0.00%
PERCENTAGE OF AREA FOR TYPE Water IS 0.00%
PERCENTAGE OF AREA FOR TYPE Sky IS 0.56%
PERCENTAGE OF AREA FOR TYPE Soil IS 12.74%
PERCENTAGE OF AREA FOR TYPE Mountain IS 40.76%

TOTAL EDGE LENGTH: 19.9324 IN.

LINEAR EDGES BETWEEN TYPES (INCHES)

	Man-Made	Grass	Trees	Road	Water	Sky	Soil	Mountain
Man-Made	0.0000	1.0283	0.0000	0.0000	0.0000	0.0000	0.6150	1.2470
Grass	1.0283	0.0000	0.0000	0.0000	0.0000	0.0000	8.0160	4.2235
Trees	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Sky	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	1.0602
Soil	0.6150	8.0160	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mountain	1.2470	4.2235	0.0000	0.0000	0.0000	1.0602	0.0000	3.7424

NUMBER OF VEHICLES: 4

GREEN VEGETATION PRESENT: YES

(Continued)

Table E4 (Continued)

Scene #9 TOTAL AREA: 11.9348 SQ IN.

RECORD NUMBER	AREA OR OBJECT	CHARACTERISTIC	COLOR	POLYGON AREA (SQ IN.)	PERCENTAGE OF AREA	POLYGON PERIMETER (INCHES)
2	Sky	None	Gray	1.1856	9.93	7.8540
3	Mountain	Barren	Brown	0.8322	6.97	7.7831
4	Mountain	Foothill	Brown	0.5187	4.35	7.6543
5	Grass	Wash Area	Green	0.3147	2.64	7.4464
6	Soil	Rocky Terrain	Tan	0.3104	2.60	7.4497
7	Grass	Wash Area	Green	1.5210	12.74	8.1969
8	Soil	Rocky Terrain	Tan	0.3381	2.83	7.9444
9	Grass	Wash Area	Green	0.6395	5.36	8.0788
10	Soil	Rocky Terrain	Tan	0.6515	5.46	7.7905
11	Grass	Wash Area	Green	3.2085	26.88	9.1890
12	Road	Gravel	Tan	0.2404	2.01	7.4030
13	Soil	Rocky Terrain	Brown	2.1742	18.22	8.5219

NUMBER OF POLYGONS: 12

DIFFERENT TYPES OF OBJECTS: 5

PERCENTAGE OF AREA FOR TYPE Man-Made IS 0.00%
PERCENTAGE OF AREA FOR TYPE Grass IS 47.62%
PERCENTAGE OF AREA FOR TYPE Trees IS 0.00%
PERCENTAGE OF AREA FOR TYPE Road IS 2.01%
PERCENTAGE OF AREA FOR TYPE Water IS 0.00%
PERCENTAGE OF AREA FOR TYPE Sky IS 9.93%
PERCENTAGE OF AREA FOR TYPE Soil IS 29.11%
PERCENTAGE OF AREA FOR TYPE Mountain IS 11.32%

TOTAL EDGE LENGTH: 40.7406 IN.

LINEAR EDGES BETWEEN TYPES (INCHES)

	Man-Made	Grass	Trees	Road	Water	Sky	Soil	Mountain
Man-Made	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Grass	0.0000	0.0000	0.0000	3.6475	0.0000	0.0000	22.4966	3.6347
Trees	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Road	0.0000	3.6475	0.0000	0.0000	0.0000	0.0000	3.6418	0.0000
Water	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Sky	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	3.6635
Soil	0.0000	22.4966	0.0000	3.6418	0.0000	0.0000	0.0000	0.0000
Mountain	0.0000	3.6347	0.0000	0.0000	0.0000	3.6635	0.0000	3.6565

NUMBER OF VEHICLES: 0
GREEN VEGETATION PRESENT: YES

(Continued)

Table E4 (Continued)

Scene #10 TOTAL AREA: 11.9792 SQ IN.

RECORD NUMBER	AREA OR OBJECT	CHARACTERISTIC	COLOR	POLYGON AREA (SQ IN.)	PERCENTAGE OF AREA	POLYGON PERIMETER (INCHES)
2	Sky	None	Gray	1.5298	12.77	8.1884
3	Mountain	Barren	Brown	0.5311	4.43	7.7478
4	Mountain	Foothill	Brown	0.6555	5.47	7.6954
5	Grass	Wash Area	Green	0.4749	3.96	7.4985
6	Soil	Rocky Terrain	Tan	0.2550	2.13	7.5310
7	Grass	Wash Area	Green	1.2488	10.43	8.4136
8	Soil	Rocky Terrain	Tan	0.4638	3.87	8.2527
9	Grass	Wash Area	Green	0.7853	6.56	8.4215
10	Soil	Rocky Terrain	Tan	0.5161	4.31	8.2280
11	Grass	Wash Area	Green	3.9291	32.80	9.5718
12	Road	Gravel	Tan	0.0276	0.23	1.2523
13	Soil	Rocky Terrain	Brown	1.5619	13.04	8.1784

NUMBER OF POLYGONS: 12

DIFFERENT TYPES OF OBJECTS: 5

PERCENTAGE OF AREA FOR TYPE Man-Made IS 0.00%
PERCENTAGE OF AREA FOR TYPE Grass IS 53.75%
PERCENTAGE OF AREA FOR TYPE Trees IS 0.00%
PERCENTAGE OF AREA FOR TYPE Road IS 0.23%
PERCENTAGE OF AREA FOR TYPE Water IS 0.00%
PERCENTAGE OF AREA FOR TYPE Sky IS 12.77%
PERCENTAGE OF AREA FOR TYPE Soil IS 23.35%
PERCENTAGE OF AREA FOR TYPE Mountain IS 9.91%

TOTAL EDGE LENGTH: 38.5600 IN.

LINEAR EDGES BETWEEN TYPES (INCHES)

	Man-Made	Grass	Trees	Road	Water	Sky	Soil	Mountain
Man-Made	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Grass	0.0000	0.0000	0.0000	0.5918	0.0000	0.0000	26.3230	3.6495
Trees	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Road	0.0000	0.5918	0.0000	0.0000	0.0000	0.0000	0.5895	0.0000
Water	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Sky	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	3.6854
Soil	0.0000	26.3230	0.0000	0.5895	0.0000	0.0000	0.0000	0.0000
Mountain	0.0000	3.6495	0.0000	0.0000	0.0000	3.6854	0.0000	3.7209

NUMBER OF VEHICLES: 0
GREEN VEGETATION PRESENT: YES

(Continued)

Table E4 (Continued)

Scene #11 TOTAL AREA: 11.9166 SQ IN.

RECORD NUMBER	AREA OR OBJECT	CHARACTERISTIC	COLOR	POLYGON AREA (SQ IN.)	PERCENTAGE OF AREA	POLYGON PERIMETER (INCHES)
2	Sky	None	Gray	1.5275	12.82	8.2864
3	Mountain	Barren	Brown	0.4796	4.02	7.7090
4	Mountain	Foothill	Brown	0.8127	6.82	7.8020
5	Man-Made	Building	White	0.0258	0.22	0.7604
6	Grass	Wash Area	Green	1.5341	12.87	9.7766
7	Soil	Rocky Terrain	Tan	0.7450	6.25	9.2332
8	Grass	Wash Area	Green	0.5203	4.37	7.8277
9	Soil	Rocky Terrain	Tan	0.3973	3.33	7.9305
10	Grass	Wash Area	Green	3.5331	29.65	9.4805
11	Road	Gravel	Tan	0.3020	2.53	7.4466
12	Soil	Rocky Terrain	Brown	2.0393	17.11	8.4668

NUMBER OF POLYGONS: 11

DIFFERENT TYPES OF OBJECTS: 6

PERCENTAGE OF AREA FOR TYPE Man-Made IS 0.22%
PERCENTAGE OF AREA FOR TYPE Grass IS 46.89%
PERCENTAGE OF AREA FOR TYPE Trees IS 0.00%
PERCENTAGE OF AREA FOR TYPE Road IS 2.53%
PERCENTAGE OF AREA FOR TYPE Water IS 0.00%
PERCENTAGE OF AREA FOR TYPE Sky IS 12.82%
PERCENTAGE OF AREA FOR TYPE Soil IS 26.70%
PERCENTAGE OF AREA FOR TYPE Mountain IS 10.84%

TOTAL EDGE LENGTH: 35.4470 IN.

LINEAR EDGES BETWEEN TYPES (INCHES)

	Man-Made	Grass	Trees	Road	Water	Sky	Soil	Mountain
Man-Made	0.0000	0.3616	0.0000	0.0000	0.0000	0.0000	0.0000	0.2947
Grass	0.3616	0.0000	0.0000	3.6699	0.0000	0.0000	16.5955	3.3623
Trees	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Road	0.0000	3.6699	0.0000	0.0000	0.0000	0.0000	3.6711	0.0000
Water	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Sky	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	3.7910
Soil	0.0000	16.5955	0.0000	3.6711	0.0000	0.0000	0.0000	0.0000
Mountain	0.2947	3.3623	0.0000	0.0000	0.0000	3.7910	0.0000	3.7009

NUMBER OF VEHICLES: 0
GREEN VEGETATION PRESENT: YES

(Continued)

Table E4 (Continued)

Scene #12 TOTAL AREA: 11.9096 SQ IN.

RECORD NUMBER	AREA OR OBJECT	CHARACTERISTIC	COLOR	POLYGON AREA (SQ IN.)	PERCENTAGE OF AREA	POLYGON PERIMETER (INCHES)
2	Sky	None	Gray	1.9175	16.10	8.3966
3	Mountain	Barren	Brown	1.0662	8.95	8.0313
4	Grass	Wash Area	Green	1.3017	10.93	8.6873
5	Man-Made	Building	White	0.0218	0.18	0.6303
6	Soil	Rocky Terrain	Tan	1.0286	8.64	9.0263
7	Grass	Wash Area	Green	0.3689	3.10	8.2225
8	Soil	Rocky Terrain	Tan	0.4872	4.09	7.5513
9	Grass	Wash Area	Green	3.1115	26.13	9.0522
10	Road	Gravel	Tan	0.0807	0.68	1.9269
11	Soil	Rocky Terrain	Brown	2.4922	20.93	8.5741
12	Road	Gravel	Tan	0.0333	0.28	1.4103

NUMBER OF POLYGONS: 11

DIFFERENT TYPES OF OBJECTS: 6

PERCENTAGE OF AREA FOR TYPE Man-Made IS 0.18%
PERCENTAGE OF AREA FOR TYPE Grass IS 40.15%
PERCENTAGE OF AREA FOR TYPE Trees IS 0.00%
PERCENTAGE OF AREA FOR TYPE Road IS 0.96%
PERCENTAGE OF AREA FOR TYPE Water IS 0.00%
PERCENTAGE OF AREA FOR TYPE Sky IS 16.10%
PERCENTAGE OF AREA FOR TYPE Soil IS 33.65%
PERCENTAGE OF AREA FOR TYPE Mountain IS 8.95%

TOTAL EDGE LENGTH: 28.8447 IN.

LINEAR EDGES BETWEEN TYPES (INCHES)

	Man-Made	Grass	Trees	Road	Water	Sky	Soil	Mountain
Man-Made	0.0000	0.6303	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Grass	0.6303	0.0000	0.0000	1.5545	0.0000	0.0000	17.7296	3.6370
Trees	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Road	0.0000	1.5545	0.0000	0.0000	0.0000	0.0000	1.5544	0.0000
Water	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Sky	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	3.7391
Soil	0.0000	17.7296	0.0000	1.5544	0.0000	0.0000	0.0000	0.0000
Mountain	0.0000	3.6370	0.0000	0.0000	0.0000	3.7391	0.0000	0.0000

NUMBER OF VEHICLES: 0
GREEN VEGETATION PRESENT: YES

(Continued)

Table E4 (Continued)

Scene #13 TOTAL AREA: 12.0847 SQ IN.

RECORD NUMBER	AREA OR OBJECT	CHARACTERISTIC	COLOR	POLYGON AREA (SQ IN.)	PERCENTAGE OF AREA	POLYGON PERIMETER (INCHES)
2	Sky	None	Gray	1.8515	15.32	8.5334
3	Mountain	Barren	Brown	1.4349	11.87	8.1839
4	Grass	Wash Area	Green	1.0927	9.04	8.0068
5	Soil	Rocky Terrain	Tan	1.1447	9.47	10.8582
6	Grass	Wash Area	Green	3.3136	27.42	11.8924
7	Road	Gravel	Tan	0.2686	2.22	5.7040
8	Soil	Rocky Terrain	Brown	2.9787	24.65	8.8091

NUMBER OF POLYGONS: 7

DIFFERENT TYPES OF OBJECTS: 5

PERCENTAGE OF AREA FOR TYPE Man-Made IS 0.00%
PERCENTAGE OF AREA FOR TYPE Grass IS 36.46%
PERCENTAGE OF AREA FOR TYPE Trees IS 0.00%
PERCENTAGE OF AREA FOR TYPE Road IS 2.22%
PERCENTAGE OF AREA FOR TYPE Water IS 0.00%
PERCENTAGE OF AREA FOR TYPE Sky IS 15.32%
PERCENTAGE OF AREA FOR TYPE Soil IS 34.12%
PERCENTAGE OF AREA FOR TYPE Mountain IS 11.87%

TOTAL EDGE LENGTH: 24.0356 IN.

LINEAR EDGES BETWEEN TYPES (INCHES)

	Man-Made	Grass	Trees	Road	Water	Sky	Soil	Mountain
Man-Made	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Grass	0.0000	0.0000	0.0000	2.8115	0.0000	0.0000	10.9327	3.6696
Trees	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Road	0.0000	2.8115	0.0000	0.0000	0.0000	0.0000	2.8154	0.0000
Water	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Sky	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	3.8065
Soil	0.0000	10.9327	0.0000	2.8154	0.0000	0.0000	0.0000	0.0000
Mountain	0.0000	3.6696	0.0000	0.0000	0.0000	3.8065	0.0000	0.0000

NUMBER OF VEHICLES: 0

GREEN VEGETATION PRESENT: YES

(Continued)

Table E4 (Concluded)

Scene #14 TOTAL AREA: 11.8724 SQ IN.

RECORD NUMBER	AREA OR OBJECT	CHARACTERISTIC	COLOR	POLYGON AREA (SQ IN.)	PERCENTAGE OF AREA	POLYGON PERIMETER (INCHES)
2	Mountain	Foothill	Tan	4.4715	37.66	12.0132
3	Grass	Wash Area	Green	0.1019	0.86	1.2938
4	Grass	Wash Area	Green	4.1374	34.85	25.2365
5	Soil	Rocky Terrain	Tan	0.5134	4.32	5.1464
6	Soil	Rocky Terrain	Tan	0.0456	0.38	0.9090
7	Soil	Rocky Terrain	Tan	0.3441	2.90	4.1741
8	Soil	Rocky Terrain	Tan	0.1632	1.37	3.5270
9	Grass	Wash Area	Green	0.0413	0.35	0.9731
10	Soil	Rocky Terrain	Tan	2.0540	17.30	11.2079

NUMBER OF POLYGONS: 9

DIFFERENT TYPES OF OBJECTS: 3

PERCENTAGE OF AREA FOR TYPE Man-Made IS 0.00%
PERCENTAGE OF AREA FOR TYPE Grass IS 36.05%
PERCENTAGE OF AREA FOR TYPE Trees IS 0.00%
PERCENTAGE OF AREA FOR TYPE Road IS 0.00%
PERCENTAGE OF AREA FOR TYPE Water IS 0.00%
PERCENTAGE OF AREA FOR TYPE Sky IS 0.00%
PERCENTAGE OF AREA FOR TYPE Soil IS 26.28%
PERCENTAGE OF AREA FOR TYPE Mountain IS 37.66%

TOTAL EDGE LENGTH: 25.3434 IN.

LINEAR EDGES BETWEEN TYPES (INCHES)

	Man-Made	Grass	Trees	Road	Water	Sky	Soil	Mountain
Man-Made	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Grass	0.0000	0.1509	0.0000	0.0000	0.0000	0.0000	19.2117	5.6393
Trees	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Sky	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Soil	0.0000	19.2117	0.0000	0.0000	0.0000	0.0000	0.0000	0.3416
Mountain	0.0000	5.6393	0.0000	0.0000	0.0000	0.0000	0.3416	0.0000

NUMBER OF VEHICLES: 0

GREEN VEGETATION PRESENT: YES

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13. ABSTRACT (Maximum 200 words)

Automatic/Aided Target Recognition (ATR) systems are being developed for current and next generation attack and reconnaissance helicopters. Part of the development cycle consists of testing and evaluation of these systems at field test facilities within the United States. Preliminary tests of ATR systems have demonstrated a high sensitivity to terrain and environmental conditions. Testers and analysts must therefore have an understanding of the relationship between system performance and terrain/environmental conditions to plan tests and interpret data.

To develop an understanding of this relationship, the Environmental Characterization for Target Acquisition (ECTA) Program was initiated. As part of this program, visible and thermal infrared imagery, meteorological data, and terrain characterization data were systematically collected from six different United States testing sites for different times of year and times of day. This report (Report 1) describes field and laboratory procedures used to obtain this data. Analysis of these data is described in Report 2.

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